JOURNAL OF THE
AMERICAN DIETETIC ASSOCIATION

VOLUME 17 April, 1941 NUMBER 4

CONSIDERATIONS IN THE SELECTION AND USE OF VALUES EXPRESSING THE VITAMIN CONTENT OF FOODS[1]

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IDENTIFICATION of food sources of a vitamin has always been of immediate interest as soon as the discovery of one of these factors has been announced, with the result that information on food sources of some of the vitamins has been obtained before very much was known of other properties. Data on the quantitative occurrence of vitamins in foods have accumulated as progress has been made in the development of methods of analysis until there are a fairly large number of values relating to the quantities of certain vitamins in some foods. In many cases, however, there are few data and in some none at all.

Where several values have been reported for the same item they usually vary considerably even when determined by one investigator using a single method of assay. It is now well known that the vitamin content of foods is not fixed and that variation from sample to sample of any food is a natural occurrence. Conditions of production are known to influence the vitamin content of some foods, and in this respect there are probably many important factors not yet recognized.

Tabulations of values for the quantities of the different vitamins in foods appear from time to time in various types of publications, generally with little or no explanation of how the values were selected. In most cases single values are presented. In some compilations two or more values are given to imply a range. This latter plan may be useful in emphasizing the fact of variation and to indicate the extent of differences in reported values, but gives no hint as to which figure is best to use when a single value is required.

In dealing with the problem of sample variation in the vitamin content of foods, it might at first seem logical to consider the computation of "averages" as a method of deriving single values. The derivation of an average in the sense of a representative value for generalizing with respect to other samples of the same food requires the analysis of more samples than is usually considered practical. A representative average is certainly not obtained by procuring a dozen or so samples of a food and analyzing them singly or as a composite, with rats or by any

[1] Read before a General Session, American Dietetic Association, New York, October 21, 1940.

other means. To take a simple mathematical average derived from the array of values reported, as the representative value, is not exactly logical since it is advisable to give each value a careful appraisal before it is included. If one investigator has reported but one value and this seems more reliable than several reported by another investigator, the single value should, it would seem, have relatively more influence in the determination of the final figure. It is also possible that some data should be ignored altogether.

The problem of selecting values for expressing vitamin content reduces more or less to a process of reviewing the data at hand and then, according to some arbitrary plan, selecting those that seem "representative" or "acceptable." In comparing different tabulations in which single values are offered it is not unusual to find instances where values for identical items are far from concordant. This is readily explained as indicating a difference of opinion as to which of several possible values was the most representative. For some inexplicable reason, when identical values do occur, they are generally accepted as indicating agreement, whereas they should be questioned as to the reason for such agreement. In most of these cases investigation will reveal that only one value had been reported in the literature.

Information on the occurrence of vitamins seems of such concern as to warrant a discussion of some of the problems that must be dealt with in the selection of values expressing the vitamin content of foods.

METHODS OF ASSAY

In appraising reported findings on the vitamin content of any food, the method of assay used should be given first consideration. Several methods of analysis have been proposed for most of the vitamins, and whether an investigator uses one or another may depend on individual experience or prejudice, the facilities available or the objective to be attained. With respect to any quantitative method of analysis, its sensitivity and the degree of precision attainable with it are important considerations. The purpose of this discussion is not to review the methods of assay that have been proposed for the various vitamins but rather to illustrate the need of attention to the significance of quantitative values that are offered.

Biological methods. These methods of analysis were the first suggested for determining vitamin content. Until recently assays of vitamin A, vitamin B_1 and riboflavin were made almost exclusively by these methods. The procedure in which rate-of-growth is used as the criterion of measurement is similar in each case. Individual members of groups of carefully standardized animals (rats) are given *each day*, in addition to a basal diet, a weighed quantity of the food being assayed as their only source of the vitamin in question. At the same time members of a comparable group of animals are given daily a known quantity of the Standard of Reference for that vitamin. All animals are weighed at regular intervals during a specified period. At the end of this time the gains in weight made by the individuals in each group are calculated and averages for the various groups are drawn. By comparing the results obtained from the animals given the test material with those from the animals given a known quantity of the vitamin in the form of the Standard of Reference, the vitamin content of the food is estimated.

Aside and apart from errors due to variation in the responses of the animals and to other factors inherent in methods of this type, there are certain physical limitations to be considered in connection with the sensitivity and precision of the methods. Rats will usually consume readily as much as 2 gm. per day of almost any supplemental food offered and may eat as much as 3 or even 4 gm. if the food is sufficiently attractive to them. The feeding of quantities of supplement in excess of 3 or 4 gm. per day is not usually considered feasible since the consequent decrease in intake of basal diet means that some factor other than the one under investigation may become the first limiting factor for growth.

These are the limitations set by the rats. Others are set by the laboratory technician. Vitamin assay by the feeding of animals means that every day or at least every other day a measured, usually weighed, portion of the test material must be prepared for each animal. A technician can usually weigh out with reasonable accuracy, day after day, innumerable portions as small as 0.1 gm., but the preparation of portions smaller than this is apt to be too tedious to be done with consistent accuracy.

The practical import of these considerations should be understood. In tests for vitamin A, for instance, the least quantity of vitamin A that will bring about a significant growth response in most rats is 0.5 International unit (I.U.), and the upper limit of the range for which consequent growth response is a measure of vitamin A intake is generally not more than 3 or 4 I.U. By using a sufficient number of animals and with careful attention to uniformity of procedure in the conduct of the assay it is possible to distinguish differences of 1 I.U. within this range. The quantity of the Standard of Reference that will give a growth response satisfactory for estimating the vitamin A content of the test material is usually 1.0 or 1.5 I.U.

Values for the vitamin A content of foods have been reported from zero to something over 25,000 I.U. per 100 gm. On the basis of the above considerations certain suggestions are made below as to limits within which differences in values should probably not be considered significant.

VALUE EXPRESSIVE OF VITAMIN A CONTENT	QUANTITY OF FOOD CONTAINING 1 I. U.	SUGGESTED LIMITS FOR JUDGING SIGNIFICANCE
I. U. per 100 gm.	*gm.*	*I. U.*
50 (or less)	2.0 (or more)	Value not significant
100	1.0	±10
1000	0.1	±100
10,000	0.01	±1000
20,000	0.005	±3000 to 4000

This summary is meant to show that values for vitamin A content less than 50 I.U. per 100 gm. merely indicate the presence of small quantities of vitamin A. Values from 100 to 10,000 at best are not accurate within closer than 10 per cent. and with higher values the accuracy is still less, probably not greater than 15 or 20 per cent. These limits were of necessity chosen somewhat arbitrarily and should not be taken as being invariable. Neither should they be construed as meaning that vitamin A values in general are accurate within the limits suggested. They are simply offered as a guide for avoiding the too literal treatment of values expressing vitamin A content of natural foods.

A similar summary may be made for vitamin B_1 (thiamin). Approximately 1 microgram or 0.3 I.U. thiamin per day is required for a significant growth re-

sponse (in rats), and rate-of-growth is proportional to the quantity of the vitamin ingested up to an intake of 8 or 9 micrograms, that is, about 3 I.U. Under suitable conditions of assay, differences of 1 microgram may be determined within this range. The thiamin equivalent that will support a growth response suitable for best estimates of vitamin B_1 values is, in the majority of cases, 3 or 4 micrograms. Suggested limits for judging the significance of differences in vitamin B_1 values, similar to those made for vitamin A, are summarized below:

VALUE EXPRESSIVE OF VITAMIN B_1 CONTENT	QUANTITY OF FOOD CONTAINING 1 I. U.	SUGGESTED LIMITS FOR JUDGING SIGNIFICANCE
I. U. per 100 gm.	*gm.*	*I. U.*
25 (or less)	4.0	Value not numerically significant
50	2.0	±10
100	1.0	±10
200	0.5	±25
400	0.25	±50

There are few if any foods that contain more than 400 to 500 I.U. vitamin B_1 per 100 gm. and the majority of our common foods contain less than 100 I.U. per 100 gm. For this reason it seemed advisable to give somewhat greater significance to the smaller values than was done in the case of vitamin A. Since there are no excessively large values for vitamin B_1, a limit of significance of approximately 10 per cent is suggested for all values above 50 I.U. per 100 gm.

Values for the riboflavin content of foods are far less numerous than are values for either vitamin A or vitamin B_1. The assay is more difficult to carry out and the results are even less exact. The least quantity of riboflavin that will give a significant growth response is approximately 1 microgram and proportional growth responses have been reported for intakes up to 10 and 15 micrograms. Differences of 1 microgram may be determined within this range. An allowance of at least 15 per cent is suggested for judging the significance of differences.

It seems advisable to mention one possible source of error common to all of these methods and one which is perhaps too often ignored: namely, the care taken to ensure complete ingestion of the supplements of test material and of the Standard of Reference. The reference material is often given to the animal directly by hand feeding. If for any reason the experimental animal does not consume the total quantity of the reference material each time it is fed the corresponding assay value of the test material will be too high. Conversely, if the animals given the test material do not eat the entire amount of the supplement, the assay value will be too low. Since it is generally easier to assure complete consumption of the Standard of Reference than it is of the test material, values probably more often err on the low side as a result of this defect in technique.

Chemical or Physical Methods. Development of practical methods of assay that are more exact than biological methods has been the aim of many who are interested in the quantitative determination of vitamins. Progress along this line is slow until the chemical identity of a vitamin is determined and even then it may be some time before a reaction or property is described that is specific and satisfactory to use for purposes of measurement.

In general two distinct steps are involved in chemical or physical methods of analysis: (1) the removal of the vitamin in a form and in a medium suitable for the measurement of its concentration

either directly or indirectly; and (2) actual measurement of the concentration. The technique of measurement usually becomes a matter of routine after it is once worked out and checked for specificity. The real problem comes in the quantitative extraction of the vitamin and in eliminating the effects of interfering substances, whether the concentration of the vitamin is being measured colorimetrically, photometrically, fluorometrically, spectrographically or by some other means.

The methods so far suggested for vitamin A must be adapted to each product. Methods proposed for vitamin B_1 are somewhat more satisfactory but much more study is required to establish details making any one of them acceptable for general use. The fluorometric method suggested for riboflavin is promising but the elimination of the effects of interfering substances is a problem that can be solved only by studies on different types of food.

The indophenol titration method for vitamin C has been in common use for a number of years and is considered reliable. Titration values may be checked within .2 mg. per cent, and with the necessary precautions the method may be used with all types of foods. Although it is not possible to make a hard and fast rule in the case of vitamin C values any more than it is for the other vitamins discussed, it is suggested that for judging the reliability of differences, values in general should not be considered significant within 8 or 10 per cent.

NATURAL VARIATION IN THE VITAMIN CONTENT OF FOODS

The fact of sample variation in the vitamin content of foods was recognized from the results of some of the first studies on the quantitative determination of vitamins. As more and more data have accumulated it has become apparent that variation in many cases is definitely correlated with certain factors. Increasing interest has been shown in this phase of vitamin research during recent years and at present a number of investigations along this line are being carried on.

Some of the more outstanding instances of variation in vitamin content may be summarized briefly. The vitamin A content of milk varies with the breed of the cow, the period of lactation and, primarily, with the quantity of vitamin A the cow obtains in her feed. Milk from cows on pasture tends to be much richer in vitamin A than milk from cows that are stall-fed, unless the diet of the latter is enriched in vitamin A. Reported values for the vitamin A content of milk cover a range of something less than 100 to more than 400 I.U. per 100 gm.

Milk products such as butter, cheese and any food containing milk fat show variations in vitamin A content similar to those for milk. The vitamin A content of butter has been reported over a range of values from slightly less than 1000 to more than 6000 I.U. per 100 gm.

Eggs vary in their content of vitamin A according to the quantity of the vitamin in the diet of the hen. Too few values have been reported, however, to do more than indicate the range.

Variation in vitamin C content has been studied extensively in apples, oranges, grapefruit and tomatoes and more recently in cabbage (1). In all of these products pronounced varietal differences have been detected. The majority of the reported values from differ-

ent varieties of apple come within a range of 2.5 to 12 mg. ascorbic acid per 100 gm. Oranges are known to vary in vitamin C content not only according to variety, but also in relation to the degree of exposure of the fruit to sunlight and the period in the season when it is gathered. Fruit from the exposed side of the tree is richer in vitamin C than that from the shaded side, and fruit picked at the end of the season contains less than that gathered at the beginning. Values reported for the vitamin C content of oranges range from 20 to 70 mg. ascorbic acid per 100 gm. The majority of these values come within 35 to 55 mg. Reported values for grapefruit are not so numerous as for the orange and do not cover as wide a range, but the median values are very similar.

Numerous studies have been made recently of the vitamin C content of the tomato especially in relation to variety. The findings of these studies include concentrations of ascorbic acid of 9 or 10 mg. per 100 gm., to 40 mg., the greater number coming between 18 and 30 mg.

In the report of the study of the vitamin C content of cabbage in relation to variety the results were interesting. Samples of 31 varieties were analyzed and values from 48 to 180 mg. were obtained, with 100 mg. per 100 gm. as the average. This average is somewhat higher than that indicated by the array of results reported by numerous other investigators which includes values as low as 20 mg. per 100 gm. and only a few that exceed 100 mg. The higher average may be due to the fact that in this single study only garden-fresh material was used.

These examples will serve to illustrate the fact of natural variation in the vitamin content of foods. Specific examples will be found in the material in tables 1–5. Such variations present a specific problem to those interested in establishing representative values, and one that is difficult of solution from a practical standpoint. To allow for all factors that might influence vitamin content is next to impossible, while to account for some and not others may lead to a dilemma. Varieties of the orange or tomato, for instance, tabulated on the basis of vitamin C content, may show one order when produced under one set of conditions while under another set the order might be very different. To give values indicating one relationship only, is to present a false picture. To present all qualifying conditions even if the data were available, carries the situation beyond the limits of practicability, for how often would any one have the necessary information regarding a food thus to apply all these possible variations in values?

LOSS OF VITAMIN VALUE IN "FRESH" FOODS

Unless a description of the food item is given, values for the vitamin content of a food are generally assumed to relate to the fresh untreated product. The significance of vitamin values in certain cases, however, depends entirely upon the interpretation that is to be given to the term "fresh." There is a great difference, for instance, between fresh vegetables purchased in the city market and those fresh from the garden.

As far as interpretation of tabulated values is concerned, the question of freshness of a food relates primarily to its vitamin C content. Vitamin B_1 and riboflavin are fairly stable and as yet

there is no reason to believe that serious deterioration takes place in respect to these during storage of foods in any form.

Practically all foods except ripe seeds contain some vitamin C. Deterioration of vitamin C begins with cessation of cell activity connected with the growth or normal function of whatever part of an organism the food represents. The rate of destruction is much more rapid in some products than others. Leafy vegetables, for instance, especially the thin green leaves, lose vitamin C rapidly. Spinach leaves as they are usually stored in the market may retain no more than 50 per cent of their original vitamin C content after two or three days. This means that a value for the vitamin C content of spinach selected as applying to leaves fresh from the garden must be reduced when it is used in connection with market-fresh samples. Oranges and tomatoes, the best known sources of vitamin C, show little change in vitamin C content over fairly long periods.

It is not possible to make general suggestions for deductions that should be made in vitamin C values to take care of changes in the vitamin C content of fresh foods. The best that can be done is to

TABLE 1

Ascorbic acid content of samples of eleven brands of commercially canned tomato juice purchased on the open market at intervals of approximately two weeks (2)

BRAND	MILLIGRAMS ASCORBIC ACID PER MILLILITER												AVERAGE	STANDARD DEVIATION
	1	2	3	4	5	6	7	8	9	10	11	12		
A	.16	.16	.16	.15	.20	.20	.16	.16	.15	.16	.19	.20	.17	.021
B	.17	.17	.16	.17	.16	.16	.15	.16	.15	.16	.16	.15	.16	.007
C	.14	.15	.15	.15	.19	.19	.15	.15	.12	.12	.14	.14	.15	.021
D	.23	.24	.24	.23	.24	.20	.21	.22	.21	.26	.23	.21	.23	.015
E	.21	.20	.17	.17	.08	.08	.22	.17	.16	.12	.14	.12	.15	.041
F	.13	.14	.14	.15	.12	.14	.16	.14	.11	.19	.17	.14	.14	.019
G	.15	.15	.15	.15	.14	.14	.14	.11	.09	.12	.15	.15	.14	.017
H	.18	.21	.18	.20	.20	.18	.18	.17	.20	.16	.14	.14	.18	.021
I	.22	.22	.17	.19	.17	.19	.19	.16	.17	.16	.18	.17	.18	.019
J	.18	.18	.23	.23	.15	.16	.15	.11	.15	.15	.20	.21	.18	.034
K	.16	.17	.13	.12	.24	.18	.21	.19	.11	.14	.15	.14	.16	.037

TABLE 2

Ascorbic acid content of samples of tomatoes of the Bonny Best variety taken from a single plot at different times during the season (3)

LOT NUMBER	DESCRIPTION OF SAMPLE	MILLIGRAMS ASCORBIC ACID PER MILLILITER	
		Sample 1	Sample 2
1	Slightly immature, firm	0.12	0.13
2	Slightly immature, firm	0.17	0.15
3	Slightly immature, firm	0.19	0.17
4	Slightly immature, firm	0.14	0.14
5	Slightly immature, firm	0.11	0.12
6	Mature, soft	0.11	0.12
7	Slightly immature, soft	0.14	0.17
8	Slightly immature, soft	0.15	0.14
9	Slightly immature, soft	0.13	0.14
10	Slightly immature, firm	0.18	0.17
11	Slightly immature, firm	0.18	0.20
12	Immature, firm	0.16	0.15
		0.13	0.16

Loss of vitamin A occurs only in certain types of foods after they have been stored for some time.

call attention to the problem and leave it as one more item to which attention should be given if and when sufficient information is available.

TABLE 3

Seasonal changes in the ascorbic acid (vitamin C) content of Florida Valencia oranges, 1936–1938, Merritt Is. Florida (4)

Results expressed in milligrams ascorbic acid per milliliter juice

ROOT STOCK	AGE OF TREES	1936–1937		1937–1938	
		Picked	Ascorbic acid	Picked	Ascorbic acid*
Sour Orange	About 25 years	11/27	.53	11/30	.47
		12/16	.53	12/31	.41
		1/9	.46	1/17	.41
		1/25	.48	1/28	.41
		2/16	.42	2/10	.41
		3/1	.42	2/28	.38
		3/18	.46	3/15	.27
		4/9	.42	3/26	.34
		5/4	.35	4/27	.36
		5/24	.36	5/20	.34
		6/24	.32	6/11	.30
		7/28	.29		
Rough Lemon	About 25 years	11/27	.47	11/30	.41
		12/16	.53	12/31	.40
		1/9	.50	1/17	.39
		1/25	.48	1/28	.40
		2/16	.42	2/10	.41
		3/1	.47	2/28	.40
		3/18	.38	3/15	.24
		4/9	.39	3/26	.30
		5/4	.32	4/27	.34
		5/24	.34	5/20	.33
		6/24	.27	6/11	.28
		7/28	.15		

* Average of duplicate determinations. Variations not greater than 2.5 per cent of the amounts determined.

PRACTICAL APPLICATIONS

The aim of the foregoing discussion has been to direct attention to some of the problems encountered in determining the vitamin content of foods and to indicate that the derivation of single values expressing vitamin content, whether they are described as "average", "representative", "acceptable", or in other terms, involves considerable judgment. Values selected by different individuals (5) for the same food are seldom identical and often show little agreement. About the most that can be said for tabulations of such material is that they should at least indicate the order of magnitude of values for the vitamins contained in the foods listed.

From the standpoint of the dietitian interested in planning diets to meet specific needs the question regarding such material is, what practical use if any can be made of it? One certainly would not suggest that it serve primarily as the source of figures to be placed after the several items in a diet in order to ascertain whether a certain grand total is reached at the bottom of the column. Such a tabulation should be useful, however, in identifying the important food sources of the various vitamins and for judging whether the quantities of vitamins contributed by the various foods in the diet are significant.

In concluding, it seems permissible to emphasize the need for giving especial attention to possible losses of vitamin value when considering the vitamin content of foods (6). Data concerning loss of vitamins in foods from whatever reason are more difficult to summarize than data on the occurrence of vitamins in the fresh, untreated foods. This may account for the lack of information concerning loss of vitamin value in foods from processing and other treatment. Whether this situation will be clarified as more data are accumulated, or will be-

TABLE 4

A comparison of the ascorbic acid content of exposed and shaded fruit—April 19, 1937 (4)

Results expressed in milligrams per milliliter orange juice.

VALENCIAS*		VALENCIAS†		VALENCIAS‡		VALENCIAS§	
Exposed Oranges	Shaded Oranges	Exposed Oranges	Shaded Oranges	Exposed Oranges	Shaded Oranges	Exposed Oranges	Shaded Oranges
.84	.53	.58	.48	.42	.30	.52	.39
.63	.51	.58	.48	.39	.29	.50	.38
.62	.50	.58	.48	.38	.28	.48	.35
.61	.50	.57	.47	.38	.27	.47	.35
.61	.50	.57	.47	.37	.25	.46	.34
.60	.50	.57	.46	.37	.24	.46	.33
.58	.49	.56	.44	.36	.24	.45	.32
.58	.48	.55	.44	.36	.24	.45	.32
.58	.47	.53	.42	.35	.24	.45	.32
.56	.46	.53	.42	.35	.23	.44	.32
.56	.46	.53	.42	.35	.23	.43	.31
.56	.44	.53	.41	.35	.23	.40	.31
.56	.44	.52	.41	.35	.23	.40	.30
.54	.43	.52	.41	.33	.22	.39	.30
.54	.43	.51	.40	.33	.22	.39	.30
.53	.42	.51	.39	.33	.21	.39	.30
.53	.42	.51	.39	.32	.21	.38	.28
.53	.42	.50	.38	.32	.21	.38	.28
.52	.42	.49	.37	.31	.20	.37	.27
.51	.42	.49	.36	.31	.20	.37	.26
.48	.40	.49	.35	.31	.20	.36	.26
.48	.39	.48	.34	.31	.18	.36	.25
.48	.38	.47	.33	.28	.18	.35	.25
.47	.38	.47	.31	.28	.18	.34	.24
.45	.34	.43	.27	.27	.17	.33	.19
Av.....56	.45	.52	.40	.34	.23	.41	.30

* Sour orange rootstock; Wabasso, Fla.
† Sour orange rootstock; Orlando, Fla.
‡ Rough lemon rootstock; Dundee, Fla.
§ Rough lemon rootstock; Dundee, Fla.

TABLE 5

The ascorbic acid content of the individual oranges of a dozen fruit of uniform size and condition all purchased at one time in one store

Results expressed in milligrams ascorbic acid per milliliter juice

.60	.47	.37	.36
.49	.45	.37	.34
.48	.39	.36	.24

Credit is due Dr. Olive E. McElroy of the Bureau of Home Economics, U. S. Department of Agriculture, for making the analyses.

come more complicated, remains to be seen.

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Consumer and Farm Welfare

The farmers' stake in consumer welfare parallels the Nation's stake in farm welfare. There are two wheels to a cart; unless both are in working condition the cart can't bring products of the farm to town or carry back city products to the farm. Farmers have a stake in consumer welfare because agriculture depends upon purchasing power in the hands of consumers, both urban and rural, to provide a market for farm products. The incomes and expenditures of consumers are the sources of farm incomes. The productivity of nonfarm consumers, on which their incomes depend, yields the goods and services which industry exchanges with agriculture for farm products.

How much consumers contribute to farm welfare rests on their ability to buy farm products. Great differences exist between per capita consumption of upper- and lower-income families. Underconsumption of foods by the latter is perhaps the most serious of farm problems. If all families could enjoy freely chosen diets of a kind that could be rated "good" nutritionally, consumers would need 15 to 20 per cent more dairy products, 35 per cent more eggs, and 70 to 100 per cent more of citrus fruits and certain vegetables.—*Report of the Consumers' Counsel, 1940, U. S. Department of Agriculture, Washington, D. C.*

COORDINATING THE DIETITIAN'S WORK WITH RELATED COMMUNITY ACTIVITIES[1]

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INVOLVED in the defense program upon which this country has embarked, is one of the major factors which have determined the rise or fall of nations—the feeding of its people. Our government is aware of the relationship between an adequate defense program and the nutrition of the population. Not only must the men who will form our front line of defense be strengthened and maintained at an optimal level of health, but also the workers, the children and mothers. In fact, the total population must receive the same benefits in order to achieve an adequate nutritional status throughout the nation. While no organized plan has been worked out on a national scale, there have been indications here and there of what communities consider essential, and consideration of the general health of the community has already begun. The town of Mount Vernon, New York, through the Commissioner of Health, was one of the first to take the initiative in awakening people to an awareness of good nutrition as a vital factor in community health. Undoubtedly, as a realization of the relationships between nutrition and general health develops, such efforts will be duplicated in other communities.

As I see it, each community will have its own job to do in accordance with its own set-up and problems. While it may be true that nutritional requirements of individuals are approximately the same in all parts of the country, the ability to meet these nevertheless varies in different communities. Therefore it is expedient for each community to deal with its own problem and consider its own resources in terms of readily available produce, markets, cost of food, economic ability of its people to provide for its needs, racial backgrounds, and personnel available in the community with proper technical knowledge, training and experience which can be utilized in connection with such a local program. Already plans are under way and the federal government has recommended to every state that a defense council be formed on which shall be a member representing health, welfare, and consumer interests. Any program directed toward nutrition, welfare and consumer interests calls for the combined efforts of persons trained in dietetics and home economics. If these specialists know what is being planned, they will have an opportunity to contribute to the program and especially to advise the groups regarding the importance and most effective methods of nutrition education. As I see it, the federal government will serve as the coordinator of these local programs all over the country. To a degree never known in our whole professional experience, the dietitian will need to be aware of the needs of her local community, to take the initiative where necessary especially in localities where there is a dearth of trained and experienced personnel in home economics

[1] Read before the Session on Nutrition and the Community, American Dietetic Association, New York, October 24, 1940.

and dietetics, and to cooperate with those technicians already in the community in developing a program for improved community health. If ever there was a time when the dietitian needed to realize her responsibility and the weight of her contribution to community health, it is now. Unity of purpose is the one thing which will gather together all the people in the community for the accomplishment of the task at hand. Unity, cooperation, coordination, and integration of knowledge, training, and experience of all professional groups equipped to contribute toward the establishment and development of a health program, whether on a local, state or national scale, are among the most vital of all requirements in a defense program.

There is much that all of us must learn before our technical equipment can effectively be put to use. A dietitian may have knowledge of food values, diet therapy, menu-making and food administration and fulfil her assignment on a very high level from the point of view of her hospital. However, the effect of her performance beyond the walls of the hospital or clinic will be promptly diminished unless she has equipped herself with fundamental knowledge in regard to community activities which are closely related to her own work, and in fact inherent in what she is trying to accomplish.

It is conceded that the life of a dietitian is a very busy one. Minutes and hours are swallowed up by daily routine and administrative details, and the countless unpredictable situations which arise in the course of the day's activities. Her job is weighed down with responsibilities involving participation in the training of dietitians, nurses, and medical students, and the feeding of the ward and private patient and the hospital personnel including the doctor, the nurse, the clerical and the kitchen staff. What a variety of attitudes, reactions, tastes, likes and dislikes she is expected to cater to! It would seem, then, that nothing more should be expected of her than the menu-making for all these groups; the purchasing or ordering of the foods; instructing and supervising the personnel in food preparation and serving; cost accounting and adhering to the administrative budget; taking inventories of equipment and supplies for necessary replacement. Nevertheless, her responsibilities cannot be limited to these restricted boundaries. The very nature and content of her job, dealing as it does with one of the primary essentials of living, the nourishment of the individual, makes it incumbent to go beyond these boundaries and to relate her job to other aspects of hospital and clinic administration. In addition, the dietitian must go outside the hospital or clinic and learn what the home economists or nutritionists in the various agencies are doing. Thus informed, her teaching within the hospital will have a more extended value in that it will be related to the everyday problems of the patient and, more particularly, its subject matter will coincide with the instruction the patient will receive when he leaves the hospital. If her work is to have an enduring quality, the dietitian must be concerned with the patient not only for the duration of his stay at the hospital or during her brief contact with him in clinics, but must relate her instruction to the life and problems confronting him in his everyday life.

Since all food service is under the jurisdiction of the dietitian, she is associated with the patient from the time his medical treatment begins in the hospital until his discharge. For the therapeutic diet, the dietitian's responsibility is to plan the meals from the allowable foods, to supervise the preparation and service of the meals and, frequently, to chart the daily food and fluid intakes. She must know the reaction of the patient to his diet and consider his likes and dislikes as much as possible when writing the menus. Since, more frequently than not, the improvement of the patient is dependent upon the nourishment, she must modify the diet to conform to the doctor's instructions and at the same time please the taste of the patient so that he will consume the food necessary to help his condition. In short, she must understand the total medical-nutritional condition of the patient in order to be able to cooperate with the physician.

The doctor makes the diagnosis and recommendations for treatment. But the dietitian needs to know more about the patient than she can learn from these physical findings in order to provide the proper diet. What of his economic status, the diet he has been accustomed to, his racial food habits? What diet will he follow when he leaves the hospital, how will his food be prepared, can he purchase the prescribed foods in the neighborhood and does the family income permit their purchase? Thus the individual patient must be considered so that his diet will conform to his racial and economic points of view, and to the instructions which he takes with him when he is discharged.

In short, we have a continuing responsibility to people who come under our care. I look upon the dietitian as a public servant, in a broad sense, for her work may be a strong factor in community health. When a patient leaves the hospital he should take with him a newly acquired knowledge of food and nutrition which he will be able to apply in his daily living. It is hoped that this knowledge will not be confined to himself but will have values for the family and even the neighborhood. This, then, is what we might call the enduring quality of the dietitian's job. It is this aspect of her work which should give her great satisfaction.

These are rapidly changing times, pierced with a widening social consciousness and responsibilities, and an increasing awareness of the interrelation and interdependence of activities which cannot be ignored. Specialists have come to realize that they can no longer confine themselves to a particular specialty without giving cognizance to all associated factors. They can treat parts only in so far as they are related to the common whole. So it is with the dietitian who must see the patient as a whole in the environment in which he lives. She must relate what she does for him in a practical way to his home situation so that her work will have continuity and a permanent rather than temporary value.

Since economic status determines so much in the life of an individual, the dietitian must know something of the incomes of those requiring her guidance, how these incomes are spent, and of living costs in the community so that she will know what the consumer can get for his money. The economic status determines the type and quantity of

food, the type of home and its furnishings, the kind of clothes, the amount of heat, whether there can be refrigeration to preserve food, and the kind of recreation and education. These are ordinarily referred to as "items in the family budget". All are tied up with the health of the individual and nutritional status is dependent upon these individually and collectively. Diet alone cannot accomplish the feat of restoration to good health, even in situations where diet could be assumed to be the primary factor in effecting a cure.

Economics is the major determining factor controlling the provision of essential needs for family living. The low-income group, or those with insufficient funds to maintain themselves, constitute a large part of our population today. Table 1 shows the distribution of incomes of 29-½ million families in the United States representing approximately one-quarter of the total population of 131 millions. The figures are taken from the report of the National Resources Committee on a study of consumer purchases, a WPA project conducted by the Bureau of Home Economics of the Department of Agriculture and the Bureau of Labor Statistics of the Department of Labor. This helps to give an overall picture of the situation. It is startling that of the 29-½ million families, 28 per cent live on incomes under $1000 a year, and 65 per cent on incomes under $1500 a year. While this does not represent the actual situation in every community, the dietitian by studying it will realize the importance of learning about conditions in her own community. Not represented in this table are the groups for which the community must assume responsibility, those dependent upon tax funds for their support and maintenance.

The dietitian has a very real responsibility in this area. It is fair to assume that a large number of ward patients fall within the lowest income group or are on relief. This is even more true of clinic patients. The type of diet served on the wards and the instruction which the ambulatory patient receives should be related in a practical way to the patient's family food budget. The dietitian must therefore know what the local welfare agencies, public or private, are providing and what is included in the money allowances with which the patient must support his family. For example, in New York City the Department of Welfare provides cash for the following items: food, shelter, light, fuel for cooking and heating during the winter months, refrigeration during the summer months, household cleaning supplies and personal incidentals. Clothing is provided part in kind and part in cash, and other items on an individual as-needed basis. The dietitian, in instructing patients, must know the basis upon which these food allowances are figured, the type and quantity of foods included, and the prices of the individual foods, so that she will be able to modify the normal diet to include other essentials of similar quality. She must be familiar with available resources for helping the patient budget his food money most economically and make this information available to him. These resources might include low-cost milk such as the 8-cent milk distributed from many centers in New York City between the hours of 6 to 8 for marginal income

and relief groups, the free school lunches, surplus foods, and the various places where day-old bread is sold at half price. The patient must be taught that adequate diets, both normal and therapeutic, can be provided from the list of low-cost foods so that his instruction will be consistent with the information later given him by the welfare agency or the clinic.

The dietitian, by cooperating with the local welfare agencies, is in a strategic position with respect to influencing relief standards for food. She might assist the agency through serving on a committee to set up adequate standards for normal diets and develop therapeutic diets on the same basis.

The dietitian who understands the economic status of the patient, the environmental factors influencing his condition, and his native food habits, will be in a better position to plan and serve foods which he will eat during his stay in the hospital and which he will be able to afford when he leaves. The foods to be included in the diet should be discussed with the patient while he is in the hospital and sufficient time allowed for dietary instruction. It might be possible during these discussions to give educational material supporting in writing the verbal information given. While the needs of the individual patient must be given emphasis, the information should be related to total family food purchases, and in so far as possible, the patient's diet planned to fit in with that of the rest of the family. This not only saves the time and energy of the housewife in planning, purchasing, and preparing the meals, but has psychological value for the family and the patient since he is not set apart from the group by his special needs. When the patient leaves the hospital it is of the utmost importance not only that he has his diet list but that he understands it, and that the foods can be purchased within the limitations of the family food budget.

Dietitians, aware of the economic limitations of patients attending outpatient clinics, will wish to review the diet lists which are distributed to the patients. I think if you studied these lists you would feel it a duty to find some means of revising them. Table 2 is an example of a diet list sent to the Department of Welfare for patients on relief for the purpose of having the food allowance increased to provide the "necessary" foods. Dietitians have told me that they are often powerless to do anything about these lists which are obviously copied from text-books, because doctors in charge of special clinics have their own ideas about diets. It must be remembered that the doctor is often unaware of the disruption in the family budget likely to be caused by his own lack of comprehension of food costs. It is disastrous for the patient to receive these unrealistic lists. He has never been able to afford the luxury of food delicacies, yet he believes that all the foods the doctor orders are essential and he therefore may insist upon having them. He is inclined to regard these foods with the same importance as medication. What is the effect upon the rest of the family, who are being served very simple fare, when an expensive delicacy is placed before the "sick" member? And what is the effect upon the sick member? The difficulty might be corrected if the dietitian would take the responsibility for interpreting the

situation to the hospital authorities. Hospital superintendents have told me that they welcome such assistance, in fact that they hold their dietitian responsible for diet information given out in the clinics.

In hospitals where there is a food clinic dietitian the problem is solved satisfactorily, for then it is possible to give individual and essentially practical instruction to each patient. However, hospitals not so equipped might help the patient by giving him a printed diet list which has been modified as necessary by the clinic physician.

New York City has already initiated one method for coordinating activities of hospital dietitians with related community activities. The Department of Welfare receives about 3500 special diet requests every month. These come to us from the outpatient clinics of 26 city hospitals, 90 voluntary hospitals, the Department of Health, clinics for the tubercular, and baby welfare stations, and from a number of private physicians who are either on the panel of the department or are family physicians treating relief recipients free of charge. It would take too long to go into the story of what has transpired during the years since the department has been granting additional funds to persons requiring special diets. For years we have been returning diet lists to private physicians, hospital superintendents, dietitians, medical social workers—pointing out that the specified foods were not within the financial ability of the patient, and that we could not ask the taxpayers to contribute funds to provide food delicacies for relief recipients.

As one of its functions, the Home Economics Section of the Department of Welfare computes the cost of diets and determines the amount of money which

TABLE 1

*Distribution of Family Incomes in the United States by Income Level**

(29½ million families of 2 or more persons, total income—48 billion dollars 1935–1936)

Income Level			
$10,000 and over	1%		
$7500–10,000	1%	2%: $5000–$10,000	
5000– 7500	1%		
4500– 5000	½%		13% more than $2500
4000– 4500	1%		
3500– 4000	1½%	10%: $2500– $5000	
3000– 3500	2½%		
2500– 3000	4½%		
2000– 2500	8%		
1500– 2000	14%		
1000– 1500	23%		87% less than $2500
500– 1000	28%	65%: less than $1500	
Under 500	14%		

* From "Consumer Incomes in the United States," page 3, August, 1938, The National Resources Committee.

shall be added to the family budget. Because of the kind of requests sent to us, this section together with our Division of Medical and Nursing Service took the initiative and presented to the assistant commissioner of hospitals a plan which can be followed by the institutions. A similar course was followed with the Department of Health. Several meetings were held with the directors of clinics of these two city departments which permitted an opportunity for frank discussion and inquiry into the problems affecting all of us, and more important, an opportunity for interpretation of functions. These meetings resulted in the appointment of a joint committee composed of hospital dietitians, a physician who was director of clinics and understood the problems within the hospital, and home economists on the staff of the Department of Welfare. The result of the work of this committee is the pamphlet, "Normal and Special Diet Lists Based on Low-Cost Foods." This has been made available to every hospital, physician, dietitian and medical social worker in

TABLE 2

July, 1940

Name: Mrs. A. Diagnosis: Rheumatoid arthritis
Age: 47
20 lb. overweight 3000 calorie diet requested

High Vitamin Diet

Fruits, 8 lb.:	5 small oranges daily
	2 lemons "
	1 melon "
	½ watermelon "
	½ coconut "
	2 cups berries "
	½ pineapple "
	1 lb. small fruit daily
	1 lb. bananas
Vegetables, 7½ lb.:	1 head lettuce daily
	1 lb. tomatoes "
	1 lb. green leafy vegetable
	1 lb. carrots
	1 lb. beets
	1 lb. tubers
	1 lb. celery
	½ lb. onion
Milk:	2 quarts Walker-Gordon weekly
Sweet butter:	¼ lb. daily
Olive oil:	⅛ lb. daily
Bread, pumpernickel:	¼ lb. daily

TABLE 3

Daily Meal Plan of Mrs. A's Diet

Breakfast: 40 oz.	8 oz. orange juice
	½ melon
	2 bananas
	cup berries and cream
	1 piece small fruit
	slice bread and butter
	½ glass milk
10 a.m. 4 oz.	1 orange or piece of fruit
Lunch: 54 oz.	8 oz. orange juice
	½ melon
	plate of lettuce and 2 tomatoes
	½ lb. green leafy vegetable
	portion of grated carrots, beets, radish, cole slaw
	portion boiled vegetable
	1 slice bread
	½ glass milk
	piece of coconut
	piece of small fruit
3 p.m. 10 oz.	banana and orange and piece of small fruit
Dinner: 60 oz.	Same as lunch and portion of boiled vegetable, slice of watermelon
Evening: 16 oz.	2–3 pieces of fruit and slice of melon

Approximately 184 oz., net weight, or 16–18 lb., gross weight unprepared fruits and vegetables.

the City of New York concerned with low income groups. The Department of Hospitals proposes to print the individual lists for distribution in out-patient clinics. Many voluntary hospitals have already revised their lists to include low-cost foods, and without wishing to appear too optimistic, I might say that our problem appears likely to be solved to the satisfaction of the hospital, the Department of Welfare and the patient who in most instances now receives practical information and can provide for his diet with the funds made available to him.

In conclusion may I refer you to tables 2 and 3, which represent a diet list as prescribed by a private physician and sent to us. From it you will gather that we still have a long steep hill to climb before we succeed in getting practical and sound information to patients, and that while considerable interest in nutrition and diet has been aroused in the last few years in the medical profession, the dietitian must still take the initiative and shoulder the responsibility for coordinating her activities with those in the community which relate to her work.

The Year for Food Consumers

During the fiscal year 1940 retail prices of food advanced on the average about 4 per cent, and the entire cost of living about 2 per cent. Quantities of foods available for domestic consumption were on the whole greater than in the year before. Indexes of income payments, indicative of the money which consumers have to spend for foods, were higher at the end than at the beginning of the year, increasing more rapidly in the 12 months than the average cost of foods at retail.

Average retail food costs reported by the Bureau of Labor Statistics in June 1940 were 5 per cent higher than a year earlier, and in July 1940 were 3 per cent higher than the year before. In July food was costing consumers more than in most months of 1939 and 1940, but less than in 1935, 1936, 1937 and through most of 1938.

Of the major food divisions dried fruits advanced most during the year, costing 12 per cent more in July 1940 than a year earlier. Dairy products advanced 7.6 per cent during the same interval, followed by a rise of 5.3 per cent for fresh fruits and vegetables and 3.6 per cent for cereals and bakery products. Among individual items, significant changes occurred in the price of canned pink salmon, which went up 24 per cent; apples, 22 per cent; wheat flour, 18 per cent; dried navy beans, 14 per cent; canned red salmon, 13 per cent; prunes, 11½ per cent; and butter, 11 per cent. Significant decreases occurred in lard and cured pork products, which were some 8 to 14 per cent lower in July 1940 than a year earlier. Potatoes and cabbage were approximately 10 per cent cheaper.—*Report of the Consumers' Counsel, 1940, U. S. Department of Agriculture, Washington, D. C.*

THE SOCIAL SCORE IN PREPAREDNESS—WHAT OF MOTHERS AND BABIES?[1]

ELIZABETH MORRISON WAGENET
National Council for Mothers and Babies[2]

THE American Dietetic Association is one of sixty national organizations forming the National Council for Mothers and Babies. These organizations represent nutrition, medicine, nursing, social work, farm groups, labor groups, professional and lay groups of many kinds, and are joined together in the Council for the purpose of working with their own resources and together toward better care for the mothers and babies of this country.

It is as important for these organizations to find a meeting ground for their social and economic concepts as it is to contribute their professional knowledge to the clearing-house. I think you agree with this for you have accepted a subject for discussion which has implications reaching to the depths of social philosophy. We cannot use the words "social preparedness" without beginning with a definition. We must have a clear realization of what we prepare for and how we do it. Then only is it useful to look at the score-board and count the factual advances toward better maternal and infant care.

We prepare, on our social front, to bring to each individual a share in the natural benefits of this country, a share in the scientific advances, a share in the results of mechanized industry to the end that he may use his own individual gifts of spirit and mind to the fullest extent.

The babies of today should be the recipients of those advantages which civilization has to offer today and tomorrow. They should be born in an environment of self-respect and given an opportunity to develop without spiritual regimentation. It is not enough to pool our professional knowledge to save lives of babies and the mothers who bear them. We prepare, through services democratically set up, not only to preserve life but to ensure the progressive betterment of civilization. For this reason it is worth while to discuss some of the points at which the ultimate goal in this program of better care for mothers and babies may become obscured. The first point where confusion may enter is in the attitude with which we approach the program. The approach will influence the measures instituted.

The Council was formed two years ago, following the United States Children's Bureau Conference on Better Care for Mothers and Babies. There was just one little word of war that crept into that meeting. Mayor LaGuardia said: "There are two ways you can approach this problem of care for mothers and babies. You can take the humanitarian approach, which I call the true American approach, of saying that people in this country are entitled to health, have a right to health, and from the very moment of birth

[1] Read before the Session on Maternal and Infant Health, American Dietetic Association, New York, October 21, 1940.

[2] Since this paper was read the name has been changed to "National Maternal and Child Health Council."

should be provided with proper medical care, and if that care cannot be provided on account of the economic condition of the family, then it is the duty of the government—the state, the municipality, I don't care which—to step in and provide that care.

"But you may take another approach, and then it is 'patriotic'. If you take this approach you can say: 'The nation must at all times be ready to defend itself, and public health is a matter of national defense. So the nation has a concern in this expectant mother because her baby might be a boy, and if it isn't a boy it might be the mother of a future boy, and we want that little boy to grow up healthy and strong. You cannot put teeth in his mouth when he gets to the draft age' . . . And so it becomes a matter of grave concern, regarding the defense of the country. And you will get away with it." So said Mayor LaGuardia in 1938.

Events have moved rapidly in two years. We have a hard job ahead in holding on to the "American approach" to social measures. In 1938 everyone smiled at Mayor LaGuardia's words and thought he was using "shock" techniques for emphasis. The audience rejected by its amusement his suggestion of the war approach. Today our concern should center around the fact that shock easily becomes deadened into normalcy. Before we know it we may find ourselves adopting a militaristic approach on our social front. But before we go to facts and figures on our social preparedness score-board, let us consider how to keep our approach humanistic, the "American approach", as Mayor LaGuardia termed it.

Humanism and democracy are closely related. Both are threatened in time of war. In both, the individual and his development are of primary importance. But if democracy is lost, then true humanism is lost also, and the social service which remains is perverted. For instance, health insurance in Germany has remained in force through the totalitarian system of government because health insurance has helped to keep the people of the country in good health for the purposes of total war. The people of Germany lost democracy and with it went whatever humanistic impulse there might have been in health insurance. The only change made in the health insurance system when Hitler came into power was the introduction of the leadership principle into the administration. By this seemingly small change, health insurance became a tool of the State to serve the ends of the State rather than to serve the people so that through the remedy of their bodily ills they might have opportunity for personal growth and development.

Obviously then, on the social front we must prepare not only by more distribution of goods and services but these goods and services must be so distributed and the distribution so administered that the concept of democracy is not impaired. Defense of our social ideals means not only clinics, free school lunches, milk for mothers and little children, the many services for which we work, but those services set up in the democratic manner. Recognition must be given to the right of reasonable equality of social condition; the right to preserve the spirit of self-respect on which democracy is based. William McDougall in his *Social Psychology* called this the "self-regarding principle", the

ability of a man, figuratively speaking, to look himself in the eye and not be ashamed.

Happily, many of our services are given in this spirit. An instance is the way in which some schools provide free lunches for children unable to pay. Tickets are given out before lunch periods, so that no child knows who receives help and who does not. Here is an instance where psychological needs are cared for along with nutritional needs. On the other hand, the words "pauper" and "indigent" are still used and certain services are given so that the one who receives automatically loses caste among his neighbors. When this is true our social services are no more humanistic and no more democratically conceived than those of the totalitarian states. In such cases physical needs are met, democracy is sacrificed.

In some states poor women will not use the prenatal clinics so sorely needed to preserve their lives and health and the health of their babies, because their traditional pride balks at being labelled a group apart, unable to order their lives as do their neighbors. The social score for preparedness against regimentation will never stand at 100 per cent until we can frame our services to keep the self-respect of those who receive them.

Let me give you an example of humanistic and democratic service in the field of maternity and infancy. With a young country doctor who practiced in a poor, mountainous district, I went to visit a patient delivered that morning of a fine baby girl. In the shack which was her home, there were two rooms. In one there were two double beds, one for herself and husband and the new baby and one for the three little boys of the family. There were no bureaus. Probably there were no extra clothes to go in them. In the other room were a table and two chairs, some boxes for the boys to sit upon, and a stove. The little boys looked bright and happy. They were good potential citizens. On the way back, I asked this young doctor if he would be paid for his services to the mother and new baby. He said with a sort of woeful smile, "Yes, after their fashion. They have no money. When the crops are sold they will still have no money, so this winter they'll make me a hooked rug." This doctor had many such patients. He treated them with the same courtesy with which he treated the few well-to-do summer residents, but obviously there would be a limit to the number of hooked rugs he could use. He and his family couldn't eat them! His paying practice suffered from the burden of his non-paying practice. He talked heatedly about what he called "socialized medicine". He was opposed to all such things but within his code he could accept, through the proper channels, the services of a nurse-midwife paid for in the last analysis by federal funds. Because of the needs of both doctor and patient, a maternity nurse able to perform some midwife duties was placed in that county. Here is an example of a service established, rising from a community need, given to the patient without loss of her self-respect and administered so that the doctor, too, was satisfied that it fitted into the democratic pattern. The service was not forced from the top. Because he had real humanism in his culture, he made some adjustments in his own thinking and both humanism

and democracy grew into a pattern of service in that community. The moral to this tale is that by keeping the needs of the individual—in this case, both patient and doctor—at the focal point in our social changes, by seeking for areas of agreement where there are radical differences of opinion, we move in the democratic method.

Each one of us must work at our own jobs—only harder—this is not enough to bring about true social preparedness for individual development. Each one must work at his own job and participate in a general effort to see clearly the implications in our changing world. Whether nutritionist, doctor, nurse, economist, or business man, each must employ the principles of psychology and sociology—those techniques which were developed to enable us to understand man in his environment. Only by foregoing professional isolation can we more thoroughly develop a democracy which will stand against the ruthless efficiency of political systems we abhor.

The value of the National Council for Mothers and Babies lies in the fact that here is one means for an exchange of ideas and understanding, a means for working together to help build community articulateness and channels of expression, the cornerstone of democracy. One way in which the National Council works is to give help to state groups wishing to study their own community needs for maternal and infant care. The state conference on needs in maternity and infancy helps to develop a local voice in measures which must of necessity stem from the federal government. The Council is non-governmental. Its function is to work by the side of government bureaus in a two-way interpretive service. Each organization within the Council can serve democracy by giving and receiving ideas, by recognizing the interdependence of professional knowledge in building social services. The National Council hopes to become more and more a clearing house for interorganization ideas. It is not adjustment one to the other which is needed so much as invention—creation of new ways—which springs from pooling experience. Adjustment is negative, invention is constructive. New ideas are always more than the sum of two old ideas. There is an added increment of value which comes from exchange.

Now for the facts and figures showing gains in maternal and infant care on the social score-board. The history of our concern with maternal and infant care has taken great strides since the early days of colonization in this country. If you will read Samuel Sewell's diary or any other record of colonial days, you will find entries every two or three pages recording the death of a neighbor's wife or child. When Judge Sewell was asked to serve as pallbearer he would note: "Received a good pair of black kid gloves." My impression is that his beautiful mahogany highboy was stuffed with good black kid gloves and that the number of maternal and infant deaths was staggering. Mothers and babies died, but families were large and farm life went on. The farm, the place of dwelling, held the family together. As people moved into towns and as housing units became smaller, it was the mother at the center of what might be called the centrifugal force of life which held the family together. We have seen the pull of outside energies weakening the family. Today, beside the fact that it is

revolting to our sense of justice in view of the advances in medical science for a mother to lose her life in childbirth, we as a nation cannot afford that loss. There is also, today, a definite "scarcity value" attached to the lives of babies. In 1939, the decline in the death rate from the 1938 figure shows a saving of 8000 babies. But the birth rate is declining.

The movement toward better maternal and infant care has progressed with increased momentum in the past 25 years. It was only 25 years ago that a drive was started to gain universal birth registration. It was not until 1933 that birth registration was established in all the states. In 1921 we gained the Sheppard-Towner Law. In 1935 Maternal and Child Health Services were established under the Social Security Act. Four years later, June 30, 1939, there were 1229 maternity clinic centers for prenatal and postpartum care in 37 states out of a total of 51 states and territories, Alaska, Hawaii and the District of Columbia included. More than one-half of this number have been established in the past two years. Almost twice as many infant and preschool conferences as maternity clinics have been established in this period. Doctors accept public care for children more readily than for mothers. Both the maternity and child care clinics just mentioned are supervised by state health agencies and set up in part with federal funds. There are also in the United States maternal and child health clinics under private auspices, so that the clinic mark on our social preparedness score-board is more adequate than the figures just quoted indicate. In 1935, the maternal death rate was 58.2 per thousand; in 1938 our latest adjusted figure is 43.5; in 1935, the infant death rate was 56, in 1938, 51 and the provisional figure for 1939 is 48 per thousand.

However, we are still far from a perfect score. In the United States there are 2500 counties with no prenatal clinics under the auspices of the health department and in some of these there are no services at all within easy distance. More disturbing from the point of view of social preparedness is a backward philosophy which retards the work of saving the number one resource of the country, its mothers and children. I have inquired of health officers about some of the counties without prenatal clinics. I have received this reply: "There are the Physicians to the Poor. If a woman wants prenatal care and can't pay a physician, she can go to them." I wonder if you as nutritionists have ever met some of the "Physicians to the Poor", appointed quite frequently for political considerations. Some of these, of course, are upright, honest and capable physicians. Some are not. In either case, what strength of will power do you suppose it takes for a woman to seek this care? What of our teaching program, so much of which depends upon the doctor and public health nurse? Doctors say that about 40 per cent of our preventable maternal deaths are due to the mother's ignorance or lethargy in seeking care. This 40 per cent of preventable deaths cannot be reduced by holding to a program of pauperization or dependence upon "Physicians to the Poor".

Sometimes the answer in regard to counties without prenatal clinics is that the state and local medical societies are opposed to any type of medical super-

vision on a clinic or conference basis. Happily, this is not universally true. The number of local practicing physicians paid from maternal and child health funds for their services in prenatal clinics last year was 1178, an increase of 54 per cent over the 1938 figure.

The history of this advance in maternal and infant care may be expressed as a growth in humanism. In it, too, is a sensing of the need of national self-preservation. The program is moving —the world is changing. But, in human beings there is a reluctance to change. Do you remember the lines from *Morte d'Arthur*:

Then loudly cried the bold Sir Bedivere:
Ah! my Lord Arthur, whither shall I go?
Where shall I hide my forehead and my eyes?
For now I see the good old times are dead ....
And slowly answered Arthur from the barge:
The old order changeth, yielding place to new,
And God fulfils Himself in many ways,
Lest one good custom should corrupt the world.

The challenge to those of us who can see change and movement, while we ourselves change and move, is to invent means of balance—balance between the forces of humanism, economics and political science. It can be done, and I firmly believe one way is to follow the law of physics, that is, as the structure of our government becomes stronger and weightier at the top in the administration of the services our humanism dictates, there must be a corresponding broadening of the base of understanding for the preservation of democracy. Your organization, the National Council, local committees, state committees, more and more striving to exchange the benefits which spring from specialized training, build up the strong base of citizen participation.

It is easy enough to say humanism must lead economics, and politics, in the sense of government, must serve both. Actually one of these three moving forces may go faster than the others, throwing what we want for this nation into the discard. Government may jump into first place, then we have Fascism or communism. Economics may jump into first place, then we have the strongest economic group battering down the other national groups, sacrificing our ideals. Humanism may get too far in the lead, throwing over common sense, then we may have Marxian socialism. It is no easy task for the citizens of a democracy to say, "We will hold the balance." Practical demonstrations of balance in local communities are the answer—more enlightenment of the people by the professions—more inventiveness on the part of all of us, community patterns allowed to operate within a framework of a national pattern.

We have an example of this in the way maternal and child health funds are set up and administered by the Children's Bureau. There are also examples in other government services. Counties place their needs before the state director of maternal and child health. They must show they can operate the plans they submit. The state director submits his plan to the federal Children's Bureau. The variety of county plans, and consequently the variety of state plans, is amazing. Federal funds go into demonstrations of maternity nursing, obstetric care, prenatal and child health clinics, postgraduate courses for nurses and doctors, the furnishing of medical, nursing, and nutrition consultants, nurse-

midwives, family life education, and so on. The pattern in each county, in each state, is different, yet the service is partly supported by federal funds. The broad base of understanding must be built in the community, in the county where plans originate. It is here, in the first place, that conflicts arise between groups, say taxpayers and social workers, or between practicing physicians and public health officers. This is the primary reason the National Council offers assistance to state groups wanting to know more of local needs and resources.

In looking at present and future needs, as a National Council for Mothers and Babies, we are not so concerned about each item of need. Each professional group will direct progress through varied channels. We are concerned with counseling together so that advances may be understood and inventiveness may accomplish practical working plans for community, state and nation.

Someone has said, "men build their cultures by huddling together, nervously loquacious at the edge of an abyss." I think there may be more than a grain of truth in this as we watch ourselves rushing for subways, driving our automobiles faster, in hot pursuit of an immediate goal. Shall we pause and ask, "Where are our institutions taking us?" It requires a strong spirit and much understanding to reverse the order and say, "We shall take our institutions along the way we want them to go." It takes more than strong spirit and much understanding, it takes also imagination, inventiveness, yielding of old ideas, and courage to face new ones.

The American Dietetic Association has much to give the National Council for Mothers and Babies in professional knowledge, in enlightened counsel, in citizens trained in the mental discipline necessary for leadership. As the Council perfects the exchange of ideas, as we more and more form a meeting place for those groups who would work to secure not only life but healthful living to mothers and babies, the Council will also better serve its members. We shall chalk up advances on the score-board of social preparedness. More than that, we shall keep the individual mother and child in mind, the American family in mind, and we shall build in the democratic manner.

Says Amiel in his *Journal*, "The ideal, after all, is truer than the real; for the ideal is the eternal element in perishable things". Toward the ideal then, in social preparedness—not because of militaristic pressure, but because of increasing humanism in culture!

Vitamin K

Vitamin K is widely distributed in nature. Concentrates of the vitamin have been prepared from alfalfa and from putrefied fish meal. The human being obtains vitamin K from the diet and from bacterial activity in the intestine. A deficiency develops when absorption of this substance from the intestine is interrupted. Faulty absorption occurs when bile is excluded from the intestine. Without bile or bile salts the vitamin cannot be absorbed.—*Editorials, J. A. M. A., 116: 144, 1941.*

HOUSEKEEPING IN DORMITORIES[1]

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THE mere fact that this topic, "Housekeeping in Dormitories", is included in a program of the American Dietetic Association, indicates that housekeeping is becoming recognized as an important factor in the management of institutions. Housekeeping is, in fact, becoming a profession in its own right.

Dormitories originally were looked upon merely as places of shelter. Now they are recognized as important factors in the educational program—as laboratories for intellectual, social and cultural growth. Today they are expected to provide not merely a physical shelter, but a shelter that is architecturally pleasing and appropriate. They provide furnishings that are of good quality and in good taste, so that students by association will come to appreciate such things; they provide three well-balanced meals, properly served, thereby teaching good eating habits and appreciation of good service; they provide a social program designed to stimulate intellectual and cultural growth; and the housekeeping department, by seeing that the buildings and furnishings are kept clean and in good repair, contributes its part to the education of future citizens by developing habits of cleanliness and neatness.

In the early days the dean of women was ordinarily in charge of the dormitory and she called upon a local housewife to assume the sketchy housekeeping responsibilities. Students generally supplied their own equipment and cared for their own rooms and laundry. As dormitories have increased in size and number and as their educational possibilities have been more fully realized, the housekeeping functions have increased in number and importance.

Today, in many of our larger institutions, we have three administrative officers in the dormitories: a social director, a dietitian, and a house manager. In others, a person variously known as the director of residence, the dietitian, the business director, or the like, is responsible for both the house and food departments. Many of you who are here today, I assume, are holding positions of this sort. And you probably have working under you a housekeeper who is untrained, but has high standards of cleanliness, orderliness and economy. In that case it is important for you, as a supervisor, to be familiar with the principles, problems, and accepted practices of housekeeping on a multiple scale.

What does housekeeping in dormitories involve? It varies with the institution and depends on a number of factors: the policies of the institution, its size and geographic location, the budget available, and the distribution of responsibilities among the various administrative officers. What equipment do you supply in student rooms? Do students care for their own rooms? Do you supply weekly or daily maid service? Do you furnish bedding? Laundry? There are many variables, but commonly the housekeeping job involves the following responsibilities:

[1] Read before the Session on Problems of Food Service and Management in Colleges, American Dietetic Association, New York, October 22, 1940.

1. Supervision of maids, porters, linen room, post-office, telephone switchboard, and trunk room.
2. The hiring, instruction, and training of employees.
3. The planning of schedules.
4. Determination, by testing and experiment, of the best procedures, cleaning supplies, utensils, etc.
5. Requisitioning and distributing of all cleaning supplies, linens, equipment and furniture.
6. Inspection.
7. The handling of complaints and lost and found articles.
8. The taking of inventories.
9. Preparing and keeping within the budget.
10. Planning redecorations and alterations.
11. Selecting new equipment.
12. Issuing orders for repairs and replacements to building and furniture.

And so on, *ad infinitum*. As in private life—"A woman's work is never done."

There are three important factors in housekeeping administration—in any form of administration for that matter, *i.e.* (1) schedules and standardized instructions—employees should know what is expected of them; (2) cooperation and fair treatment, and this should work both ways between employers and employees; and (3) inspection—endless and without slack.

Let us go into these a little more in detail. We won't spend time discussing personnel policies or employee relations because the same principles apply here as in any other types of organization. I do want to stress some of the policies and practices, however, which I feel are essential to a smooth-running and efficient housekeeping program.

We said that *employees should know what is expected of them*. To my mind nothing is so important as carefully worked out schedules. These should be based on actual time studies and should allow ample time for a good employee to do a good job under the peculiar circumstances and conditions involved. Furthermore, they should be accepted by the employee as fair. In working out schedules for old and reliable employees I recommend that you take them into your confidence and encourage them to make suggestions and criticisms. They will frequently plan a harder schedule than you would dare recommend.

For example, the table on page 338 is a schedule which was worked out for one of our dormitories, Seth Low Hall.

The maids in this hall work 44 hours per week; chambermaids do not clean baths but they are responsible for 52 student rooms. Waste is collected daily; bath and face towels are distributed three times a week; beds are changed and student rooms cleaned thoroughly once each week. When you break this down into minutes you find that it is a very full schedule but it works smoothly; the rooms are clean, the maids are happy, and they are not overworked. Here are some of the reasons:

There are 52 rooms on a floor and each maid is responsible for one whole floor. She takes pride in her floor and endeavors to keep it looking better than any other floor.

She has her own equipment—all the utensils and supplies she needs to do her job well—in her own equipment closet located on her floor.

She has her own linen cabinet also on her floor. The linen maid replenishes the stock daily so that she always has what she needs close at hand.

She has a hotel maid's truck which saves her many steps.

Her waste and soiled linens are taken to the basement by a porter.

Her schedule and manual of instructions are posted inside her linen cabinet.

Except for lunch, there is no occasion for her to leave her own floor; no occasion for her to visit or loiter with other maids. Everything she needs to do her work well is provided and close at hand. There is a minimum of wasted effort.

8:30–12:00; 12:30–5:00, Monday through Friday
8:30–1:00 Saturday

Seth Low
Fifth Floor Maid

	MORNING				AFTERNOON		
	Towels	Apts.	No. Rms.	Extras	Apts.	No. Rms.	Extras
Monday	B, F			Clean corridors thoroughly; make up 54 beds, guest rooms	54	7	Maid's Locker Room
Tuesday	B, F	53	6		55	5	Maid's Locker Room
Wednesday	B, F	56	5		57	5	Maid's Meeting 1–2
Thursday		51	6		52	7	
Friday	B, F	58	5		59	6	
Saturday				Guest rooms; clean maid's equipment, closet, linen cabinet, truck; clean baths 51, 52, 53, 54.			

Maid's equipment closet—Apt. 59

Therefore she is able to take care of 52 rooms in a 44-hour week.

In Johnson Hall, one of the Columbia dormitories, the maids make the beds and clean student rooms daily, change beds and thoroughly clean rooms once each week. Here each chambermaid is responsible for 22 student rooms in a 30-hour week. (Let me say here that I think it is highly desirable to have maids in dormitories working on a 30-hour basis, so that they will not be in student rooms too early in the morning and will be out before the students return from classes in the afternoon.)

In Whittier Hall, another Teachers College dormitory, maids working on a 44-hour week are responsible for 33 student rooms and 1 large bathroom. Rooms in Whittier are cleaned thoroughly once each week and dusted a second time.

Dr. Augustine, in her book, *Some Aspects of Management of College Residence Halls for Women*, gives figures from a number of institutions on the amount of work which can be expected of maids as well as a schedule of the average per capita labor hours and costs for the house department.

In addition to his schedule, each employee should have *written instructions* telling just what he is expected to accomplish in his regular routine and describing the accepted procedures and methods. Written instructions should be supplemented from time to time by discussion in employee meetings, demon-

strations, and the like. New employees should be started off right by being trained in the actual performance of the job. I like to carry this matter of written instructions even further. In our halls we post in each student room a room service card which saves a lot of time and questions at the beginning of the year and which reads as follows:

The maid on your floor is Mrs. Smith. She will clean your room and change your bed on Friday mornings. Please put away small articles on that day so that better service can be given.

Waste-baskets will be emptied daily, except Sundays and holidays, between 8:30 and 9:00 a.m.

Bath and hand towels will be distributed on Mondays, Wednesdays and Fridays. Clean towels can be provided only in exchange for used ones.

Please do not tip the maid. Do not ask her to perform personal services for you or to change her cleaning schedule.

If the service is unsatisfactory in any particular, please get in touch with Miss Schoonmaker, the House Manager, or with Mrs. Gibbs, Manager of Residence Halls.

The second important factor we mentioned was *cooperation and fair treatment.* Perhaps we do not need to go into this, for it certainly is not concerned solely with housekeeping administration. Under this heading, however, we might emphasize again the importance of providing employees with the equipment and supplies essential to the satisfactory performance of their various tasks. This does not mean that you have to provide a great variety of utensils or expensive soaps and powders. The essential articles of equipment can be boiled down to a very few, but they should be good. Good soaps, cleansers, waxes, and so on, can be purchased at prices much lower than some of the much-publicized brands.

In our "Manual for Chambermaids," we list the following as essential equipment: 1 linen closet with supplies in specified quantities; 1 linen truck with 1 bag for soiled linen and 1 bag for waste; 1 vacuum cleaner; 1 brush broom; 1 dry mop; 1 wet mop; 1 dust-pan and brush; 1 hand duster with long handle; 1 radiator brush; 1 brush for upholstered furniture; 1 pail; 1 toothbrush; soap jelly; Noxon polish, furniture polish, cleaning powder; dust cloths and scrubbing cloths; 1 carpet sweeper; 1 carry-all basket for cleaning supplies; 1 safety step-ladder.

The third factor in good housekeeping administration is *inspection*, and the importance of this function cannot be stressed too emphatically. A good inspector is not born, but made—self-made by constant training in the observation of small details. A casual glance around a room will reveal almost nothing. Even the best of us needs a check list to keep reminded of all the places to look for dirt or trouble. I shall always be grateful for the experience I had understudying Anne Owens, the executive housekeeper of the Sherry-Netherland Hotel, New York. Every apartment had to receive a thorough inspection before it was turned into the front office for rental and when we inspected an apartment we not only looked for dirt and needed repairs, but we made sure that the cake of Ivory soap in the shower faced up with the picture of the Sherry-Netherland, *not* the Ivory soap label; that the Manhattan Telephone Directory was placed on top of the Brooklyn Directory and the Classified Directory at the bottom of the pile,

and with all edges even; that there were *exactly* (no more and no less) 6 sheets of letter-heads, 6 envelopes, 4 telegraph blanks, 2 air-mail envelopes, and so on. Fortunately for us, we do not have to go into such detail as that, but here are some of the things we should look for in checking a student room:

Does the lock work easily?
Is the outside window ledge clean?
Are the window sashes and sill clean?
Does the window open and close easily?
Will the transom stay closed?
Are draperies clean?
Are curtains clean?
Are the lamp shades and bulbs dusted?
Are the backs of the chairs and the rungs free from dust?
Are the chairs steady and the edges free from splinters?
Are the knobs tight on the table and chiffonier?
Are the shelves of the table and bookcase dusted as well as the top?
Does the radiator leak?
Is the radiator clean between the coils, and is the baseboard and adjacent floor clean?
Is the pipe free from brown, oily deposit left by escaping steam?
Are the glass and frame of mirror clean and does mirror need resilvering?
Are baseboards clean behind furniture?
Is the floor dusted under the furniture?
Is the rug clean, stained, torn, or too badly worn?
Is the bed frame dusted and the bed well made?
Is waste-basket clean and lined with paper if necessary?
Are the pictures hung straight and the tops dusted?
Is the picture moulding clean?
Are the lights working properly?
Does the shade roll up well? need mending or cleaning?
Is the door transom fixture in working order and dusted?
Are the door and door-frame clean?
Do the hinges squeak?

Everyone is inclined to skip the corners if they are not checked up occasionally and every worker relishes praise for work well done. Inspection should be unheralded and not routine if workers are to keep on their toes. Administrators and employees alike need to be educated in proper attitudes toward inspection. It is not a process of spying or trying to catch somebody. It is a necessary function of supervision—a check-up not only on the maid's work but also on the physical condition of the room and equipment. If maids are doing their work properly they have nothing to be concerned about. They and their supervisors are working together for a common purpose—to keep their building clean and in good repair and to make the residents comfortable and happy.

I do not have time now to go into specifications for equipment or cleansers or to discuss particular housekeeping procedures, but remember when you are buying cleaning supplies that it is not necessary to buy fancy brands at fancy prices. As our chemistry professor used to tell us, "the difference between a $.05 and $1.00 cake of soap is $.95." By consulting the magazine *Soap*, *Consumer's Research*, the "Better Buymanship" pamphlets, and government publications, and with the cooperation of your own chemistry department you can discover low-cost supplies which are as good or better than the higher priced items.

Fundamental for almost all cleaning processes is a good neutral soap. In institutions like ours we can buy a good oil soap—in powder, chip or paste form—

mix it with tri-sodium phosphate and water and have a good all-purpose soap jelly at a cost of 4–5 cents per gallon.

We all need a scouring powder which should not be acid and which should be only slightly abrasive. Maids will save powder and porcelain surfaces if they will rub soap on their cleaning cloths and then add the scouring powder, rather than sprinkling the powder all over the basin or tub.

Furniture polish can be made simply and cheaply from kerosene, paraffin oil and pine oil, according to formulas which you will find in government and other publications.

Good wax can be purchased at a fraction of the cost of publicized brands.

I have barely indicated the wide scope of responsibilities in dormitory housekeeping. I believe firmly that each administrative officer in a residence hall, whether social director, dietitian, or house manager, should have enough knowledge of the problems and purposes of the other departments to be able to appreciate their point of view and to cooperate intelligently. If I have in these few minutes given you such an awareness of the problems and functions of the housekeeping department, I have accomplished my purpose.

Home Economists and National Defense

Home economists in meeting assembled at Cleveland last June showed themselves very eager to do their part in national defense. Exactly what special role was likely to be assigned them was not so clear. But whatever happened, there was no doubt that they could do much for "behind the lines" defense simply by carrying on their regular work, perhaps with more than usual determination and with new enthusiasm born of the fact that they were in a strategic position to improve national health and morale by helping to improve personal and family life . . . the executive committee [A.H.E.A.] urges the state home economics associations to complete the emergency registration of all home economists against the time when a definite call to action comes. It will be a feather in our cap if we can then say promptly, "Yes, in such and such a place so and so is available for your special kind of work." Of course the home economists who register should not be allowed to get the idea that they will be called on immediately or for some spectacular service. Probably when they are needed it will be for rather humdrum work which will not be at all exciting but which may really be more useful to the community or the nation than some of the services which emphasize smart uniforms and much limelight.—*Editorial, Journal of Home Economics, 33: 108, 1941.*

STUDENT LABOR IN COLLEGE FOOD SERVICE[1]

ELIZABETH INK
John Jay Hall Dining Rooms, Columbia University

WHEN classes started at Columbia in the fall of 1940, 150 students had already been selected by the University Appointments Office and sent to the John Jay Hall Dining Rooms to be assigned to what are commonly known as "meal jobs" for the coming year. These assignments were the result of weeks of study of the family situation and scholastic and employment record of each student who applied for work. When all of the above information was assembled each individual case was discussed by the committee on student aid. The students were listed in groups A, B and C according to their need and merit. Group A was sent to the dining rooms first, then group B and then group C until all the student positions were filled.

Upon his arrival at the dining rooms office, each student is interviewed to determine the hours that he will be free to work and the type of position which, because of past experience, he is best fitted to fill. The types of positions for which students may be used are those of waiters, bus boys, countermen, (both for cafeteria and soda fountain), check-room boys, dishwashers, cashiers, typists, and others to set tables and pour fruit juices. Since much catering is done for teas, receptions, luncheons, dinners and smokers, not only in the private dining rooms but elsewhere on the campus, approximately 25 or 30 students are employed as "substitutes on call" and, as the name implies, are called upon from day to day to wait on table and serve for these parties. It is especially encouraging to find students, as we often do, who because of their capacity for leadership, interest in their work and good common sense, are able to assume a good deal of responsibility and thus are of great assistance to the supervisors particularly at parties where, because of number or location, it is extremely difficult to have a supervisor in charge throughout the whole period of service.

Each student works two hours a day for which he receives three meals for that day. In the case of cashiers who of necessity must work longer than two hours, each hour in excess of the two hours daily is paid for at the rate of 40 cents per hour. Several years ago the students seemed to be in favor of being paid on a strictly cash basis, with the privilege of spending as little or as much as they wished on food. While we realized that it would be financially impractical to pay them cash equivalent to the purchase price of the meals they had been receiving, we decided to experiment with the idea. During the following summer session all payments were made in cash at the rate of 50 cents per hour. Before the six weeks were over there was not a doubt in the minds of most of the students as to which plan they preferred. They were almost unanimous in their requests for the old system of payment, so at the beginning of the fall term it was resumed. At present they receive a breakfast consisting of fruit or cereal with cream, egg

[1] Read before the Session on Problems of Food Service and Management in Colleges, Annual Meeting, American Dietetic Association, New York, October 22, 1940.

with potato or bacon, toast, roll or muffin and beverage; a luncheon consisting of appetizer, entrée (such as meat pie), vegetable, bread and butter, dessert and beverage; a dinner consisting of appetizer, salad, entrée (such as a roast or steak), two vegetables, bread and butter, dessert and beverage. The choice of foods permitted to student employees is the same as that for all students who eat in the dining rooms.

Students may work five, six or seven days a week, whichever they prefer, and those who work five days may use their fifteen meals, with the exception of breakfasts, on any of the seven days of the week. The reason for making an exception in the case of breakfasts is to discourage the tendency on the part of the students to sleep late and omit breakfast.

The John Jay Hall Dining Rooms consist of a main dining room where there is cafeteria service for breakfast and luncheon and waiter service for dinner, four private dining rooms which may be used separately or collectively for parties, and a grill room called the Lion's Den, where there is a soda fountain, and where service is continuous from 9:30 in the morning until midnight or 1 o'clock the following morning. For this reason students may be assigned to any two-hour period between 6:30 in the morning and late in the evening. During the past academic year we served approximately 1600 meals daily in the main dining room and 800 meals daily in the Den. In addition to this, throughout the year we served approximately 110 teas and receptions, 130 luncheons, 100 dinners and 60 smokers. During the football season we maintain a training table for our team in one of the private dining rooms and the same is done for the crew during crew season.

Schedules are made out for each unit of service and the duties of each student are typed out in triplicate. The original is kept on file in the office for reference, one duplicate is also filed in the office to be corrected for use the following year and the other duplicate is given to the student on his first day of work. Each student's duties are explained to him by the supervisor in charge and help is given to each student throughout the year, enabling him to execute his duties as efficiently as possible. Meetings are held at the beginning of the year for all new students. At these meetings the manager discusses the relationship between management and student worker and guest and explains what will be expected of the student. Throughout the year meetings are held for students in each type of position. At the waiters' meetings, which occur most frequently, forms of service are gone over in detail, questions are asked and suggestions are made by the students. Each waiter is given a copy of the instructions for waiters, which includes the form of service of the particular unit in which he is working. In making these out we try to have the service correct, but at the same time simple and adapted to the needs of that particular unit. We are rather proud of the fact that at alumni luncheons our student workers have served a four-course luncheon to more than 500 people in 47 minutes, that is, 47 minutes after the start of service every waiter was out of the dining room. The reason why speed was such an important factor in this case was that the after-dinner speeches were broadcast over a radio hookup.

It is always a temptation in planning an organization to have everything not only well thought out ahead, but also protected by an iron-clad set of rules and regulations, so that everything will run like clockwork from beginning to end. I cannot imagine any place where it would be more difficult to reach this ideal, however, than in a dining room employing 150 undergraduates who are quite naturally much more interested in their studies, their extracurricular activities, and their dates, than they are in restaurant operation. Therefore regulation of absences and other necessary discipline must be tempered somewhat, and this is easier if we think back to our own years in college and remember how very important it was to make this team or that club, or the staff of the college paper, and that to miss an important college dance was quite a calamity.

In meeting this problem we have found a student rating card quite helpful. Such a card is made out for each student and on it he is rated "good", "average" or "poor" in ability, personality, attitude, reliability and punctuality and appearance. There is also a place for comments not covered by the above. Each student knows that, at the end of the year, this card will be sent to the Appointments Office and may help or hinder him in obtaining other employment, not only in college but when he leaves. There are very few students whose attitude or work is so poor that they are ineligible for work another year, and no student is put on an ineligible list without having been given repeated warnings. On the other hand we often have the pleasure of calling the attention of the Appointments Office to a student whose work is so outstanding that it deserves mention.

Before closing I should like to mention a few pros and cons of student labor.

Of the arguments against student labor the most outstanding is the expense factor. Our rate of pay at Columbia increases our cost of student employment. Two hours for three meals is the exception rather than the rule for most colleges. The general policy is to work a meal for a meal or three hours for three meals. Other ways in which expense is increased are through the necessity for more supervision, increase of laundry and breakage of dishes, lack of uniformity of serving portions, accidental waste of food, maintenance of necessary records, along with the fact that an untrained student will naturally do less work, and a poorer quality of work in a given period of time, than a trained and experienced employee. This factor of quality of work makes it difficult for the college dining room to compete with neighboring commercial restaurants, yet compete it must when no income such as prepaid board is assured.

In spite of our persistant efforts to maintain regular schedules for the employees, there are many occasions when they are absent from work and the substitute, in all probability, has not even the benefit of the experience which the regular student has gained on the job.

Of the arguments for student labor the most forceful is that it helps some needy students who otherwise might not be able to attend college. It also helps those students who, though able to attend college, must do so on a very limited budget. Through such em-

ployment, a great number of needy students are able to enjoy three regular, well-balanced meals each day, and therefore live healthier lives than they might otherwise.

In some instances student employment may prove to be economical, for example, where many waiters are needed for short periods of time. Efficient part-time professional waiters are not only difficult to find, but must be paid at a relatively higher rate than full-time employees. Then, too, if the student employee tries to do a good job in the right manner, he can create more good feeling among guests than can an older, professional employee.

In the final analysis one must choose between two courses: Shall we fill as many positions as possible with student employees, or shall we not? Our policy has been to give priority to students, for we feel, as do the college authorities, that it is better for the more fortunate students to help pay a part of the way for the needy ones. There is no doubt but that such a policy makes operation more expensive. It has the desired effect, however, of making a college education available to more students.

Influence of Dietary Protein

ON THE TOXICITY OF SULFANILAMIDE

The therapeutic application of sulfanilamide is not infrequently attended by untoward toxic manifestations involving the hematopoietic organs, the liver, the integument, the gastrointestinal tract and other structures. These have been described in the literature in considerable detail although their immediate causes are not understood. In previous work it was shown that the chronic toxicity of ingested selenium was greatly influenced by dietary protein. Impairment of growth, serous effusions, liver cirrhosis, and anemia which regularly followed the continued ingestion of selenium at a suitable level in a low protein diet could be greatly mitigated or completely prevented by the inclusion of liberal protein. It became of interest to inquire whether a similar relationship might not exist with reference to subacute or chronic intoxication with sulfanilamide . . . A low protein diet (7 per cent) increased the susceptibility of rats to orally administered sulfanilamide by increasing the mortality rate and the incidence of anemia as compared with similarly treated rats on a diet containing 30 per cent protein. Supplementing the low protein diet with cystine to the level contained in the 30 per cent protein diet had no effect, while a similar supplement of cystine plus methionine decreased the mortality rate but not the incidence of anemia. Examination of the blood sulfanilamide levels suggests the possibility of greater retention of the drug in animals on the low protein diet.

Histologic examination of the tissues failed to reveal specific damage attributable to low protein sulfanilamide treatment. The former appears to be preventable by methionine but not the latter. A slight focal interstitial nephritis was present in about a third of the sulfanilamide-treated animals irrespective of diet. Splenic pigmentation and myelosis were most pronounced in the sulfanilamide-treated animals on the high protein diet suggesting increased activity of hematopoietic organs to compensate for the blood destruction.—*Pub. Health Rep. 56: 24, 1941.*

MENU MAKING FOR RESIDENCE HALLS[1]

SELMA STREIT
Scottish Rite Dormitory, Austin, Texas

RESIDENCE halls connected with universities, colleges and schools are maintained so that students may have comfortable places in which to carry on the many activities of living, in the most satisfactory manner. These dormitories also should provide opportunities for educational development while giving the students patterns for standards of life outside of college.

The many types of residence halls vary according to the college, the income level of the student residents, the kind of service offered, and the standards maintained. However, there is one condition that is common to most residence halls. In each, meals are served to the same students three times daily.

The person who plans the meals in a residence hall, therefore, is responsible for the selection of the whole day's dietary as well as for maintaining high standards in menu making, food preparation and service which the students may carry over into everyday living when college days are past.

The skill of a trained dietitian becomes evident in the menus she prepares to meet the needs of the type of institution she manages. In residence halls, where the usual service is table d'hôte, with little or no choice in the menu, the students are dependent upon the meals set before them for their daily nourishment. And so the question of body needs and requirements is of the utmost importance. The diet must be adequate, all of which need not be elaborated upon before the members of this organization. The food needs of the group having been ascertained, the meals should be planned to meet those requirements. This, however, is only the first step in the production of successful meals. Success in menu making, as in any other art, requires careful study, intelligent planning, a workable knowledge of psychology, ingenuity and imagination, and the observation of a few simple rules.

To plan intelligently, the dietitian must know and keep in mind the availability of the equipment and serving facilities, her employees' ability, the amount of time the employees can spend on food preparation, the season of the year, and the location of the residence hall.

The equipment in the kitchen largely determines what the menu will be. Foods should be selected so that the preparation and cooking can be divided between various equipment, as ovens, tops of stoves, steamers, boilers, choppers, mixers, and so on. With careful planning the equipment may be ample for routine use, though it may not be adequate when there is an extra load. For example, if you have oven space for only 50, why attempt to have individual chicken pies baked for 100? Instead of poorly prepared chicken pies, serve the chicken in some other way in keeping with the equipment available. The extent of the refrigeration facilities conditions the type of dessert and salads

[1] Read before the Session on Problems of Food Service and Management in Colleges, American Dietetic Association, New York, October 22, 1940.

that can be served. In fact, the amount and kind of equipment materially influences the selection of all types of food and the kind of meal served.

If the kitchen lacks power machinery, the hand-work must be carefully planned to fit into the employees' time. Therefore the dietitian must know exactly how long it will take to prepare the various foods. Even though the labor supply may generally be adequate, dishes requiring much labor in preparation will need to be matched with others which may be more quickly prepared. A balance must also be maintained between foods requiring last-minute preparation and those that can be prepared earlier.

Not only the employees' time but also their ability will influence the dietitian in her menu selection. If she is fortunate in having trained and experienced employees, she can expect them to execute the more difficult types of menus. However, a good dietitian who carefully supervises can inspire even an untrained cook to produce good food.

It is good dietetic practice to plan meals according to the weather and the season of the year, since these affect the appetite and food tastes. Holidays lend an appeal to certain foods which they may not have at other times. A wise dietitian uses certain foods at the appropriate time, thereby making a gala occasion of holidays.

Dietitians should try to learn the food habits of the people in the locality in which they are employed. There are commendable regional dishes and fairly typical cuisines in the different sections of the country. However, the more provincial the locality, the more indigenous are the food habits of the people. The food habits of the individuals making up the resident group should always be considered in menu planning. After the dietitian has won their favor through satisfying these native food tastes, she can gradually introduce new dishes and new seasonings into the menu, and thus help the students to develop a more cosmopolitan taste in foods. It is difficult to realize fully the dietary limitations of the majority of the students. Family food habits, state of mind, religion and other factors determine the reaction to the food presented. And to make the task of the dietitian more difficult, there are almost as many homes represented, each with different standards, preferences and prejudices, as there are individuals in these groups. The problem of building better nutritional habits cannot be solved merely by supplying the student with the knowledge of what is best for him. His appetites and aversions for specific foods constitute a real psychological problem. Truly it takes not only imagination and ingenuity but also a good working knowledge of psychology to be able to broaden the food habits of a resident group and at the same time make them like the change.

The dietitian who aims to satisfy the resident group must also study the markets and buy carefully and efficiently. Because of quantity needs, particularly when away from the large cosmopolitan markets, availability and seasonableness are special problems. Foods, especially fresh fruits and fresh vegetables that are in season, abundant and cheap, should be emphasized. But surprise the students once in a while with an out-of-season delicacy, and the meals to them immediately become more interesting.

The average college dormitory is operated on a low-profit basis and though the incomes of different dormitories may vary greatly, they are usually predictable and stable. The food cost should be maintained at the lowest cost consistent with a high quality of food service. Good food need not be expensive, but poor quality food is always expensive. It is more economical, and certainly better psychologically, to buy and serve smaller portions of the best quality food than to buy and serve large helpings of an inferior grade that will be wasted. The amount of waste in the garbage can indicates whether the students are well satisfied. If good food is well chosen and excellently prepared, and the size of portions regulated, the edible waste should be negligible.

Standardization of recipes permits a close control of quality and yield. From long experience I find the simplest recipes are the most popular. Good, simple food, carefully cooked and correctly seasoned, is always more palatable to the majority than unusual combinations and mixtures. A housewife might persuade her family that a casserole of onions and apples is delicious, but I have yet to see an institutional group that would relish that dish or any other similarly strange mixture.

The director of food needs to use all the ingenuity and imagination she possesses in planning menus. She must not only provide an adequate diet—varied, interesting and esthetically pleasing at all times—but also one which daily will bring food satisfaction to students who have been eating in the dormitory over a long period of time.

Some one has said, "Variety is the spice of food as well as life." Striving for variety in meals is a real job. It keeps the menu maker constantly on her toes and always on the lookout for new foods and new ways of preparing old foods. To secure variety the old standbys on the menu need not be neglected, but new dishes must appear occasionally. The old dishes must be served with new combinations or at a different or unexpected time, and even though they are popular, they must not be repeated too often. It is the element of surprise that enlivens the menu. Surely there is nothing more deadly to the morale than having to eat the same kind of food on the same day of the week with the same group of people, day in and day out, year in and year out! Even though the menus are not used in rotation, some dietitians make the mistake of using the same combinations of vegetables, salads and desserts with each main meat dish. That type of monotony is almost as bad as the other.

The principle of variety pervades all of life. In the daily round of sunrise and sunset, the sun never rises or sets at the same hour on two successive days, and no two sunsets ever were alike, nor two leaves on a tree. The dietitian has the opportunity to make use of this principle, yet in menu planning many of us fail to realize the importance of variety in menus especially for students who eat three meals a day, seven days a week in the same dining room.

Variety is as much a matter of color as it is of new dishes. Attractive colors in food are remarkably stimulating, and can be obtained with the right combinations of fruits and vegetables. Variety also may be obtained by carefully planned garnishes or by changing the shape, seasoning, flavor, or combina-

tion of the food. Each meal should have contrasts in color, shape and flavor, as well as in texture and consistency. In fact, more often than not, variety guarantees that meals are dietetically sound. The appearance of the prepared dish is essentially involved in the quality of palatability. Skilled catering calls for sensitiveness with regard to the way food looks as well as tastes. To cater skilfully, the dietitian herself must enjoy good food.

Menus should be made out well in advance of the time they are to be used. It is easier to make new menus when there is time to think of new recipes, new ideas, and new suggestions, than when rushed and hurried a few hours before the menu must be prepared. When menus are made ahead, the work in the kitchen can be planned so that it may be accomplished with a minimum of effort and the entire organization will therefore run more smoothly. However, the dietitian should be adaptable. She should be prepared and ready to change the menu on short notice should weather, market conditions, or any other unexpected contingency make this advisable.

The residence hall dietitian who plans meals that are made up of good food skilfully prepared and appropriately combined, so that foods complement each other in color, texture, flavor and appearance, as well as in nourishing qualities, will give her students satisfying menus.

The Need of Health Education

Never before have those working in the field of health education and preventive medicine had such an opportunity as the selective service act offers to evaluate the results of public health measures of the past twenty years. Some disappointments may be in store for us, but such scanty preliminary evidence as I have presented indicates that some progress has been made. Likewise such information presents a challenge to all engaged in health work from the elementary school through the college. It seems reasonable to assume that the results of the physical examinations of young men drafted in 1940 will, as in 1918, cause a renewed interest in preventive medicine and health education and give us valuable information which will guide in the development of the public health program of the future.—*Boynton, R. E., The health of college students and national defense, J. A. M. A., 116: 787, 1941.*

EDITORIAL

UNCLE SAM NEEDS DIETITIANS

A letter recently received from the Surgeon General's Office, War Department, states that approximately 400 dietitians will be needed by June 30 of this year, according to Lenna F. Cooper, chairman of the Defense Committee, American Dietetic Association. The Civil Service Commission does not now have a sufficient list of eligibles to fill the above quota. The Commission at the present time is giving a nation-wide examination for dietitians. In the interim, many of the dietitians who are enrolled with the American Red Cross have been approached and some of these have been appointed. In accordance with the understanding with the American Red Cross at the time the enrollment of "medical technologists" was begun, the War Department cannot call these enrollees into the service except in time of war or when war is imminent. The present limited emergency does not constitute a reason for calling American Red Cross technologists into the service.

Hospitals are being built in all of the newly erected Army camps and many others are being enlarged. One dietitian who arrived recently at an Army hospital writes that at present the hospital has 750 patients and that "there are just two of us, although the Colonel is trying to get three more dietitians immediately." From what was learned recently through a conference in Washington in which Miss Cooper participated, this is typical of the situation in many Army posts. Quoting further from the above letter, the dietitian in describing their reception says, "The medical administrators and mess officers were delighted when they heard the dietitians had arrived. They said, "We're glad you are here. There certainly is need for you."

There seems to be a distinct effort on the part of Army officers to see that dietitians are given an opportunity to perform the services to which they are accustomed in civilian hospitals. Commanding officers have been informed by the Surgeon General's Office of the professional training of dietitians and the services they are capable of rendering. This is quite different from the situation at the beginning of the World War when the word "dietitian" was unfamiliar to most of them.

Officially[1] the duties of the dietitian have been described as follows:

> The dietitian in the Medical Department of the U. S. Army is a civilian employee, a citizen of the United States and a graduate of an approved course for Hospital Dietitians or an equivalent which is recognized by The American Dietetic Association. She is directly responsible to the Mess Officer or the Director of Dietetics, who, it is contemplated, will be a Major in the Medical Corps in most of the larger hospitals. Under him she is responsible for the entire food service to the patients and in some cases, the personnel. She will (1) plan balanced menus for all diets bearing in mind the value of the ration (2) supervise the preparation and service of all meals to both tray and dining room patients (3) keep close inspection of waste (4) direct the employees in matters pertaining to the preparation, serving and storage of food (5) assist in the ordering of food supplies and procurement of kitchen equipment and (6) give instructions in and demonstrate the prepara-

[1] Personal communication from the Surgeon General's Office, December 31, 1940.

tion of special diets to patients when such diet is ordered by the doctor in charge.

Further information is also given concerning the duties of the mess sergeant, whose functions have seemed somewhat to overlap those of the dietitian, but which in the following statement seem limited chiefly to supplies, accounting, and "policing" which in Army terms means cleaning and keeping things in order.

> The mess sergeant is charged with the duties of providing and arranging all details of food supply in an organization under supervision of the mess officer. Ordinarily he is an experienced general cook and in addition possesses the ability to supervise and control all details and keep accounts of organization mess. He also has a fair knowledge of different food values and is capable of preparing menus to provide the necessary variety in diet. In the performance of his duties he must have ability to handle men, knowledge of simple figures, and ability to purchase supplies in quantity, some knowledge of records and a thorough knowledge of the importance of cleanliness, sanitation, and food conservation. It can be readily seen that the duties of mess sergeant and dietitian are closely allied in many instances. Therefore, while the dietitian will not serve under a mess sergeant she will, when duties overlap, be required to give him such assistance as is necessary.

Now that S.839, a bill to authorize the appointment of female dietitians in the Medical Department of the Army, has been introduced in the Senate by Senator Sheppard and referred to the Committee on Military Affairs, we may be able to convince Congress that the granting of military status would permit a more efficient functioning within the department. But until then every dietitian who goes into the Army will be helping toward this end by her efficient work and spirit of cooperation. S.839 provides that female dietitians "shall be appointed by the Surgeon General of the Army, with the approval of the Secretary of War, under such regulations as the Secretary of War may prescribe." They shall be allocated to grades of dietitian, head dietitian, "not to exceed 10 per centum of the authorized strength of female dietitians", and one to the grade of chief dietitian. All appointments of persons under the provisions of this Act, after the first group of such appointments made after the enactment of this Act, shall be made in the lowest grades. Promotions to higher grades shall be made by the Surgeon General, with the approval of the Secretary of War. Any dietitian so appointed shall, for the purposes of promotion, longevity pay, and retirement, be entitled to credit for all full-time service rendered by her subsequent to April 6, 1917 as a civilian employee of the Medical Department of the Army. Dietitians allocated to the grade of "dietitian" shall hold the same grade and relative rank as a nurse of the Army Corps. They shall be entitled to the same pay, longevity pay, subsistence and rental allowances, leaves of absence, travel allowances, medical attention, age and service-retirement benefits, disability-retirement benefits, and other benefits as those to which members of the Army Nurse Corps who rank with them are entitled.

What can we as an Association and as individuals do to meet the present demand for dietitians? The answer seems to be fourfold:

1. Apply to take the examination[2] which is now being held by the Civil Service Commission in order that you will have a Civil Service status if you are employed in an Army hospital.

2. Enroll with the American Red Cross for duty in time of war unless other responsibilities make this impossible.

3. Increase the enrollment of student dietitians if you are giving an approved course.

4. Encourage other qualified hospitals to offer a course for students. For information concerning this, write to the Educational Director, American Dietetic Association, 185 North Wabash Avenue, Chicago.

In order that we may better understand the situation, the following statement from the Director of the Placement Bureau, American Dietetic Association, is quoted:

I have never known of so many openings at this time of year and we have never had so few unemployed people. It is going to tax the best efforts of all of us to handle the situation in the next eight months in such a way that the profession does not "lose ground". I am hoping that we will all try to persuade employers to give consideration to married dietitians who are interested in working, if not for the permanent position, then most certainly for the many relief positions which will be opening up in the very near future.

Surely, Uncle Sam needs our help and we must give it!

[2] Further information and application forms for the position of staff dietitian may be obtained from the Secretary of the Board of U. S. Civil Service Examiners at any first- or second-class post office, or from the U. S. Civil Service Commission, Washington, D. C. The salary is $1800 a year, less a 3½ per cent retirement deduction. Appointments are to be made in the Public Health Service, Veterans Administration, and War Department.

CURRENT COMMENT

PROBLEMS IN THE ADMINISTRATION OF COOPERATIVE DORMITORIES[1]

FERN M. GLEISER

The management of the cooperative residence hall must attain three objectives in addition to the program for successful management of other dormitories. I am going to discuss these objectives and suggest means of accomplishing them.

The first aim of all student cooperative organizations is to lower living costs for students. This has been the fundamental reason for the introduction of cooperative living groups, since the first one was established in 1887 to the present. At first the problem was less complicated since the groups had to meet only raw food and rent costs. Today the finances of our cooperative units are very like those of other dormitory systems. The practice of subsidizing student cooperative groups is becoming less common and the budget now includes not only food cost and possibly rent, but also a salary for an experienced dietitian,

[1] Read before the Session on Problems of Food Service and Management in Colleges, American Dietetic Association, New York, October 22, 1940.

all operating expenses, auditing of books, depreciation of equipment, and reserve for repair and replacement.

A capable financier is needed to manage successfully a cooperative system which can net a satisfactory return to the student for his labor, and at the same time give him a standard of living equal to that of the average student in the same college community. At present we are operating cooperative dormitories on an income that represents 41 per cent less than that paid for board in our other halls. Our cooperative halls are completely self-supporting and have been able to accumulate a sizable surplus in addition to meeting all costs of operation, a reserve for repair and replacement, and depreciation. No additional fees are levied in the system except for dish breakage. The total breakage for a quarter is pro-rated to each student and paid at the end of the twelve-week period.

A lower living cost may be the chief concern of the cooperative hall student, but there is another which must not be overlooked by administrators. It relates to that which I have chosen to discuss under the second objective of a successful cooperative organization: *i.e.* to maintain standards of living and standards of admittance to the group such that no disfavor reflects on the student who lives in a cooperative hall.

There are several means by which this has been accomplished in cooperative organizations. Cooperative halls preferably should be located among the other halls on the campus. The furnishings should be equal to those in other dormitories and the standards of food service comparable to those in other halls. Ideally, the plan as carried out in one of our state universities lays a broader foundation for development of desirable attitudes on the part of the students it serves. This university has recently opened its first women's residence hall. There are two units in the building—one cooperative, the other noncooperative. The two units in this new hall are separated only by doors, between kitchens on the first floor, and in the corridors on the other floors. The furnishings have the same quality and beauty in the cooperative as in the noncooperative unit.

The position held by the cooperative halls on our campus has been due in some degree to the students within the groups. While no student whose scholarship is below average may secure a place in a cooperative hall, the scholastic rating of the group is much above average. Last year one of our women's cooperative dormitories was awarded the scholarship cup given each year to the hall having the highest scholastic average among the dormitories. The other women's cooperative hall ranked third in scholastic standing. Both groups ranked above the all-college average and the all-women-student average. The men's cooperative hall stood first in the four men's dormitory groups.

The social program of our cooperative halls is identical with that of other halls. This has been a factor in the development of social poise of the cooperative hall student. A faculty tea or dinner is given by the group each quarter. Besides the dormitory social program, students may each have two faculty guests a quarter without paying the usual guest fee.

I believe all of these points have a

relation to the status of the cooperative group on a campus.

The third objective is one for which the manager is chiefly responsible. That is to make cooperative group living an experience profitable to the student in his courses in college and later in his profession. Particularly is this true for the home economics student. Usually we think of the value to dietetic and institution management majors, but results of training in organization of work, budgeting of time and directing student committees in the preparation of dinner in a cooperative hall, have been factors aiding in a successful teaching career.

With regard to the men's group, life in a cooperative hall has been cited as a factor conducive to the graduate's success in personnel work and factory management. The cooperative halls provide an excellent experimental laboratory, one wherein classroom teaching is put into operation. For the dietetic and institution management major there is no other form of experience in college which gives as complete training. A quantity cookery class teaches the fundamentals of quantity cookery, but how many courses include thorough experience in preparation of foods served at breakfast, luncheon and dinner? If the director is a good teacher she can motivate much of the work performed in a hall. She can encourage the student who has a food sense and an experimental talent with foods. It is gratifying to see a student's interest in foods develop. For example, one student took as her problem the improving of the breakfast cocoa. The cocoa had been poor one morning, good another, and the next morning perhaps fair. She was so interested in the cause of this variation in flavor and palatability that every morning for several days she arose at 6 o'clock and made the cocoa until she found the secret of producing a uniformly good beverage.

The accomplishment of these three objectives is essential to a successful cooperative dormitory system. The development of such a program offers an incentive to the institution management director found in no other college food service position. The cooperative system of student living is an example of our American way of life. There is opportunity for every individual in the organization to share in the success of the organization and the happiness of its members. To the extent that our democratic ideals are practiced in the achievement of a high goal for the organization will cooperative systems of student living succeed.

CHILE REORGANIZES ITS HOSPITAL DIETARY DEPARTMENTS

ESTEBAN KEMÉNY, M.D.

Chile with its 4000-mile coast-line and diversity of foods is of special interest to the nutritionist. From tropical Arica to arctic Magallanes, the living conditions and food habits of the people vary widely. The most generally available foodstuffs in the north and central zones are cereals, especially wheat and corn; fruit, such as oranges, grapes, avocado pears (*paltas*) and custard apples (*chirimoyas*). Meat and milk are not over-abundant, while seafoods, in spite of the longest seacoast in the world, are consumed only at the point of origin and in Santiago where transportation facilities permit. In the rainy South, cattle-raising conditions are more favor-

able and in Magallanes the intensive sheep-farming supplies mutton so abundantly that frozen meat can be exported in large quantities. Chilean wines, so cheap that they are available to most people, are among the best in the world and can hold their own with the most famous French wines. A favorite condiment is the Chile pepper (*aji*) which is used either fresh or dried and ground and prepared as a paste with oil.

In this country there are about 120 hospitals and similar institutions, mostly belonging to one government organization called Servicios de Beneficencia y Asistencia Social. This organization had its origin in private enterprises for benefiting the sick and indigent and actually maintains 96 per cent of all the hospitals distributed in 12 hospital zones throughout the country. It is managed by a director general, Dr. Javier Castro Oliveira, assisted by a staff who in turn head several departments. This organization is under the control of a central board, the Junta Central de Beneficencia y Asistencia Social, presided over by the minister of health, Dr. Salvador Allende. This Junta Central constitutes the Beneficencia's highest autonomous executive body. This system of uniting all hospitals under one control has many advantages with regard to the logical distribution of hospitals throughout the country. Furthermore, it facilitates the teaching and training of the staff, standardizes the equipment and centralizes the purchasing. Most hospitals are supplied, as far as furniture, instruments, drugs and part of the foodstuffs are concerned, by a central purchasing department, the Central de Compras. This type of hospital organization was highly praised by the first Latin-American Congress held in Santiago early in 1940, in which the writer took part.

A vast program of hospital building is now in progress, in the best traditions of American hospital and sanatorium architecture. Some old colonial buildings are still in use, however, in Santiago and in many provincial towns. There are three schools of nursing which grant a university degree and supply the hospitals with adequate nursing staffs. However, the number of graduates is not yet sufficient to meet the demand. The social worker, too, has an important role in the hospitals and several schools give a three-year course of training in this field. There was a complete lack, however, of personnel trained in hospital dietetics. Further, but little attention has been paid to adequate planning and equipment of hospital kitchens. Conditions were particularly poor in the pantries and ward kitchens. The writer, therefore, was invited by the Beneficencia to reorganize hospital feeding, basing such reorganization upon the system in effect at the University Clinics in Budapest directed by Professor von Soós, under whom the writer served as assistant for several years.

The first step in the reorganization of hospital dietetics was the training of a staff capable of managing an up-to-date dietary department. A school for dietitians was therefore started in May 1939, patterned largely after that of the Budapest Diet School. The training period is divided into three terms, the first of which yields a general knowledge of nutrition, food technology and laboratory technique. In the second term the students receive a thorough grounding in culinary technique, working three

days a week in the kitchen preparing menus in which they apply the theoretical principles of the normal diet. They also attend classes in hospital economics and in the administration and management of institution kitchens. During the third term the students work mornings in hospital kitchens and in the afternoon they learn to fill prescriptions for special diets and to prepare these.

The admission requirements give preference to those who have had training in home economics. After the course is completed satisfactorily, the graduate dietitian is permitted to wear the lilac cross which is the emblem of the Budapest School of Dietetics, and a white uniform which includes a lilac ribbon on the cap.

The next step was the reorganizing of the existing systems in the hospitals. As a test hospital the writer was given the Hospital Barros Luco, a 320-bed hospital in one of Santiago's southern suburbs. First it was necessary to transform and equip the main kitchen. Old-fashioned coal stoves were replaced by highly efficient gas ranges, baking ovens and frying kettles. In the hospital buildings four pantries or distributing kitchens were installed. Each is directed by a dietitian and serves as a distributing center for 70–80 patients. In this hospital the dietitians are members of a religious order.

With better facilities as to equipment and staff, a new system of dietary department administration has been introduced. This in the main corresponds to the "index system" in use at Budapest. The earlier fixed menus and special diets have been replaced by an à la carte or selective menu. The main kitchen prepares a list of dishes available for the next day. This list constitutes a basis upon which the dietitian makes up each patient's menu according to the medical prescription and individual taste. The coordination of this program with the prepared list is the dietitian's job. A special accounting system has also been introduced. The cost value of each dish is established in units and the dietitian is obliged to buy the food from the kitchen or store-room, being permitted a nominal value of 600 units for each patient. If the average daily cost per patient exceeds this figure the dietitian is immediately notified and required to balance her budget allowance the following day. This system permits a close control of the daily food cost and allows the dietitian complete freedom in preparing menus and diets limited only by the need to keep within the daily allowance of 600 units per patient.

The first six months under the new régime were entirely satisfactory. The food budget was not exceeded and the garbage control showed a marked reduction of waste. As a result, a demand arose for dietitians in other hospitals and sanatoriums for tuberculous patients, and many dietitians are now working in the beautiful new sanatoriums in Valparaiso and Putaendo. It can justly be said that this new profession is slowly making its way in this progressive South American country.

It is interesting to mention the dietitian's work in the educational field. A food clinic has been opened in a polyclinic, the Centre de Salud de Santiago, where the dietitian has an opportunity to teach people to prepare special diets by means of practical demonstrations.

This short account of conditions in

Chile shows that this country is progressing rapidly along the lines of modern hospital feeding and in spite of the difficult financial situation in most hospitals the country is forging ahead in every field of health welfare. Chile, therefore, is taking a leading position in South America in so far as its hospitals and public health policy are concerned.

THE SCHOOL LUNCH PROGRAM AND THE WPA AND NYA

MARGARET BATJER

The general community acceptance of the WPA school lunch project in the 45 states in which the program operates is indicative of its value. Reports of general health improvement, weight increases, improved scholastic and attendance records and fewer behavior problems would indicate that the school lunch program is a national means of ensuring child welfare.

In developing school lunches the WPA has had the support and cooperation of many community groups. The projects are sponsored by state departments of education, city or county boards of education, county commissioners, departments of public welfare, or other public agencies legally constituted to prosecute such work. Non-profit organizations such as parent-teacher associations often act as co-sponsors and assist in the promotion and development and help to raise funds for food and equipment in order that the federal contribution may be limited to payment of labor. Community participation is also secured through the establishment of an advisory committee comprised of such persons as the school superintendent, the school or county public health nurse and representatives of the faculty, the school board, the department of health and various civic clubs. Gardening and canning projects are often operated in connection with school lunch projects as a source of food supply.

Increased allocation of food products for school lunches by the Federal Surplus Commodities Corporation, which cooperates in the program, has made possible a considerable expansion of school lunch projects during the current school year when it is expected that about 6,000,000 children in 45 states and the District of Columbia will receive a free hot lunch daily. Approximately 50,000 women are employed to prepare and serve these lunches.

The majority of the women workers employed on school lunch projects are unskilled with limited educational background, and little or no work experience. In order to train them in the special work to which they have been assigned, competent home economists are employed who have had experience in vocational teaching, extension service, public welfare work, institution management or some other field of home economics. Such persons are rarely available on the certified rolls of the WPA and therefore are employed on a non-relief basis. At present the WPA school lunch program in the 45 states and the District of Columbia employs approximately 450 home economists who are graduates of accredited colleges and universities.

The NYA takes part in two types of nutrition programs in which food is prepared and served to school children and other youth groups: namely, the preparation and serving of school lunches and the serving of lunches and other meals to NYA employees.

The objectives of both are similar: to provide well-balanced, nutritive meals to underprivileged school children and other young people and an opportunity for young women to obtain experience in marketing, menu planning, food preparation and food service for larger than household groups; to develop in each worker a knowledge of general care and use of kitchen equipment, proper dishwashing technique and use and care of power equipment; and to give work experience as waitresses.

Under supervision, workers so trained prepare and serve the noon meal and sometimes breakfast to the school children at the school. However, in some localities where the schools have no lunchroom facilities, the meals are prepared and served to school children in NYA centers, usually located in small rural communities.

Surplus foods are supplied by the Federal Surplus Commodities Corporation for the lunches. These may be supplemented by food raised and canned by NYA employees and contributed by co-sponsors. Like the WPA school lunch program, that of the NYA is co-sponsored by community agencies and supervised by dietitians or home economics teachers. In cases where lunches are served on the NYA projects, the supervisor is provided by the NYA.

The second phase of the NYA food serving program is the serving of meals to its employees. In small centers, the employee groups are not much larger than good-sized families, but in large centers the food preparation is on an institution scale. Many centers have their own gardens and the workers can fruits and vegetables for winter use.

Patient is as patient does

Twice each year the superintendent, the head nurse, and the chief of medical staff will each have to live for a few days in a hospital room to see how easy or how difficult it is to get sleep and rest. In order to get new and better ideas on postoperative care the chief surgeon and the surgical resident will occasionally have to submit to an operation. I once knew a surgeon who prided himself on the strictness with which he kept water away from his patients for days after an operation. Then he fell ill himself and had to have his appendix out, and his surgeon, thinking to please, withheld all water for days. Finally the frantic patient got his brother to smuggle in to him several quarts of cold beer which were rapidly consumed without harmful effects. After that this surgeon's patients never went thirsty following an operation.—*Alvarez, W. C.: What a hospital can do for a community, Hospitals, January, 1941.*

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BOOK REVIEWS

Clinical Pellagra. By Seale Harris, M.D., Professor Emeritus of Medicine, University of Alabama. Assisted by Seale Harris, Jr., M.D., formerly Assistant Professor of Medicine, Vanderbilt University. St. Louis: The C. V. Mosby Company, 1941. Illustrated. Pp. 494. Price $7.

It is fitting that a book of this type should be written by a distinguished southern physician who has been a close student of the subject since 1906, the year that marked the beginning of real progress in the diagnosis and treatment of pellagra. Over 200 years ago, according to Dr. Harris, pellagra was recognized as a disease entity. While the first case of the disease was reported in New York in 1864 it may have existed in endemic form in the South since the eighties or earlier. At any rate the death rate has been reduced at least 75 per cent in the last 30 years.

Dr. Harris devotes the first section of his book to the history and epidemiology of the disease, with due attention to the use of alcohol as a factor in many cases of pellagra. The second section is devoted to an historical review of the search for the cause of pellagra. He classifies these etiological theories into four groups: toxins, infections, food deficiencies and vitamin deficiencies. Dietitians and nutritionists will be interested to note that food deficiency was believed to be a cause of pellagra as early as 1791, protein food and milk, in particular, having been advocated in treatment. More than a century later Goldberger and his associates proposed the amino-acid deficiency theory, to be followed by his investigations proving the existence of the p-p factor.

Dr. Harris then traces the work of other notable investigators: Sebrell, the Duke University group, and finally that of Elvehjem and his associates which according to Dr. Harris "marked the beginning of the end in the quest for the essential cause and cure of pellagra." Dr. Harris adds, however, his belief that Elvehjem's discovery of nicotinic acid as the p-p factor in vitamin B "is but the beginning of experimental studies to prove the underlying pathological causes of nicotinic acid deficiency." He suggests that liver insufficiency with and without hepatic pathology, is an intrinsic factor in pellagra.

The chapter on vitamin deficiency theories opens with an account of Funk's studies in 1910–11 in which he isolated three fractions from yeast, one of which was nicotinic acid. It was not until Elvehjem, more than twenty-five years later, proposed nicotinic acid as a specific, that dramatic results were effected, sometimes within twenty-four hours following the administration of nicotinic acid. Nicotinic acid deficiency, however, is but one of the probably multiple vitamin deficiencies in pellagra, all of which may predispose to the disease or effect complications, *i.e.* beriberi and scurvy.

Dr. Harris then lists the conditions (other than dietary) and diseases which predispose to pellagra, in which he includes pregnancy, infectious diseases and diabetes. An interesting chapter on sunlight in the genesis of pellagra is followed by one giving the author's summary of his views on the causative factors. He then presents a chapter on pellagra, pernicious anemia and sprue, which, while allied nutritional diseases, he believes to be three distinct and separate disease entities.

The balance of the book is devoted to discussions of pathology, clinical investigations, symptomatology, diagnosis, prognosis, prophylaxis and treatment, and an extensive bibliography and complete index. Here again are sections which the dietitian should not fail to read, for Dr. Harris is an ardent crusader for better nutrition which he believes is "the most important public health problem of today."

Hawaiian and Pacific Foods: A Cook Book of Culinary Customs and Recipes Adapted for the American Hostess. By Katherine Bazore, Chairman of Home Economics Department, University of Hawaii. New York: M. Barrows and Company, Inc., 1940. Pp. 286. Price $2.50.

During the past year we have been literally buried in cook books—but nearly all of these have been novel, highly individualized in character. It is as though the authors sensed the need of a special lure with which to re-awaken an interest in home kitchens. Then, too, there has been an expressed need of knowing the customs and tastes of all groups—national and racial. And what better means of knowing these than through learning about their food

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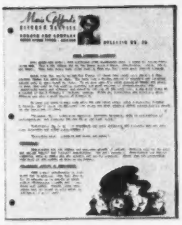

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habits and tastes? In doing so we also enrich our culinary resources.

Hawaii and the Pacific isles offer a distinct contribution to our culinary culture. Miss Bazore's book was not written after a hasty tour; its contents are based on eleven years' residence in Hawaii and evidence a scholarly interest in its people and their foods. Separate chapters are devoted to the foods and customs of the seven nationality groups which make up the population of Hawaii. Miss Bazore relates her experiences in the native markets and stores; she lists the characteristic dishes of each group; she includes recipes, the majority of which call for ingredients generally available in this country. She tells how Hawaiian meals are served, and adds several illustrations of table services. A complete index, extensive references, table of pronunciation and translation of terms, combine to make the book exceedingly helpful to students of home economics, as well as dietitians and homemakers seeking variety in menus.

Introductory Foods. By Osee Hughes. New York: The Macmillan Company, 1940. Pp. 522. Price $3.

This new foods textbook has been written with three factors in mind: that college food courses are now offered earlier, either in the freshman or early in the sophomore year; that such courses include little or no experimental work; and that the demonstration method is now replacing the experimental work. The author believes that fundamentals can thus be taught with less time and effort and the student may more readily acquire better food standards.

The book is divided into three parts: namely, the nutritional and hygienic aspects of the study of foods; composition and nutritive value of foods, theories and techniques of food preparation and pertinent buying points; and the planning and serving of meals. The text, on the whole, is clearly and authoritatively presented in logical order and the content is amply illustrated and documented. An interesting feature is a special chapter on frosted foods.

In a book of this type it is difficult to understand the motive in the listing of the ingredients in such recipes as are included. Nor in the light of recent knowledge does it appear advisable to make the broad statement on p. 84 that "all vitamins known to be essential in human nutrition are present in milk", and on p. 138 that "as sources of vitamins, meats do not rank high." The text following the latter quotation might conceivably present the known facts concerning the nutritive value of meat in a fairer light with respect to vitamins at least. These are but minor dissenting views regarding a book which promises to establish itself firmly as a useful text in food courses.

Foods: An Introductory College Course. By Margaret M. Justin, Dean of the Division of Home Economics; Lucile Osborn Rust, Professor of Home Economics Education; and Gladys E. Vail, Professor of Food and Nutrition, Kansas State College. Boston: Houghton Mifflin Company, 1940. Revised edition. Pp. 659. Price $2.80.

This beautifully bound text, written for use in classes for college freshmen, was reviewed in its first edition in this JOURNAL for March, 1934. The typographical arrangement is pleasing, the order logical and the content sound. Developments in recent years have necessitated the amplification of certain phases of subject matter. Thus the second edition. In the opinion of this reviewer, the book may be unreservedly recommended for its purpose.

Dietetics Simplified: The Use of Foods in Health and Disease. By L. Jean Bogert with Laboratory Section by Mame T. Porter. New York: The Macmillan Company, 1940. Second edition. Pp. 742. Price $3.

Dr. Bogert and Miss Porter's book has merited wide acceptance as a reference text on dietetics. It is sufficiently detailed for the home economics student and the student of medicine and nursing, yet understandable to the intelligent non-student reader.

In keeping with advancing knowledge the chapters on vitamins in this second edition have been largely rewritten and in the chapter on high vitamin diets due emphasis has been given to the place of vitamins in diet therapy. The table of vitamin concentrates with their content in milligrams or units and suggested dosage is an added helpful feature.

New problems and recipes have been included under the laboratory section and a special feature, "Discussion Questions and Problems," at the end of each chapter. The tables of food

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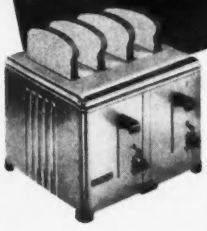

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For its treatment of the vitamins, alone, this book is well worth its cost.

Food Buying Today. By Alexander Todoroff. Chicago: The Grocery Trade Publishing House, 1939. Pp. 128. Price $2.

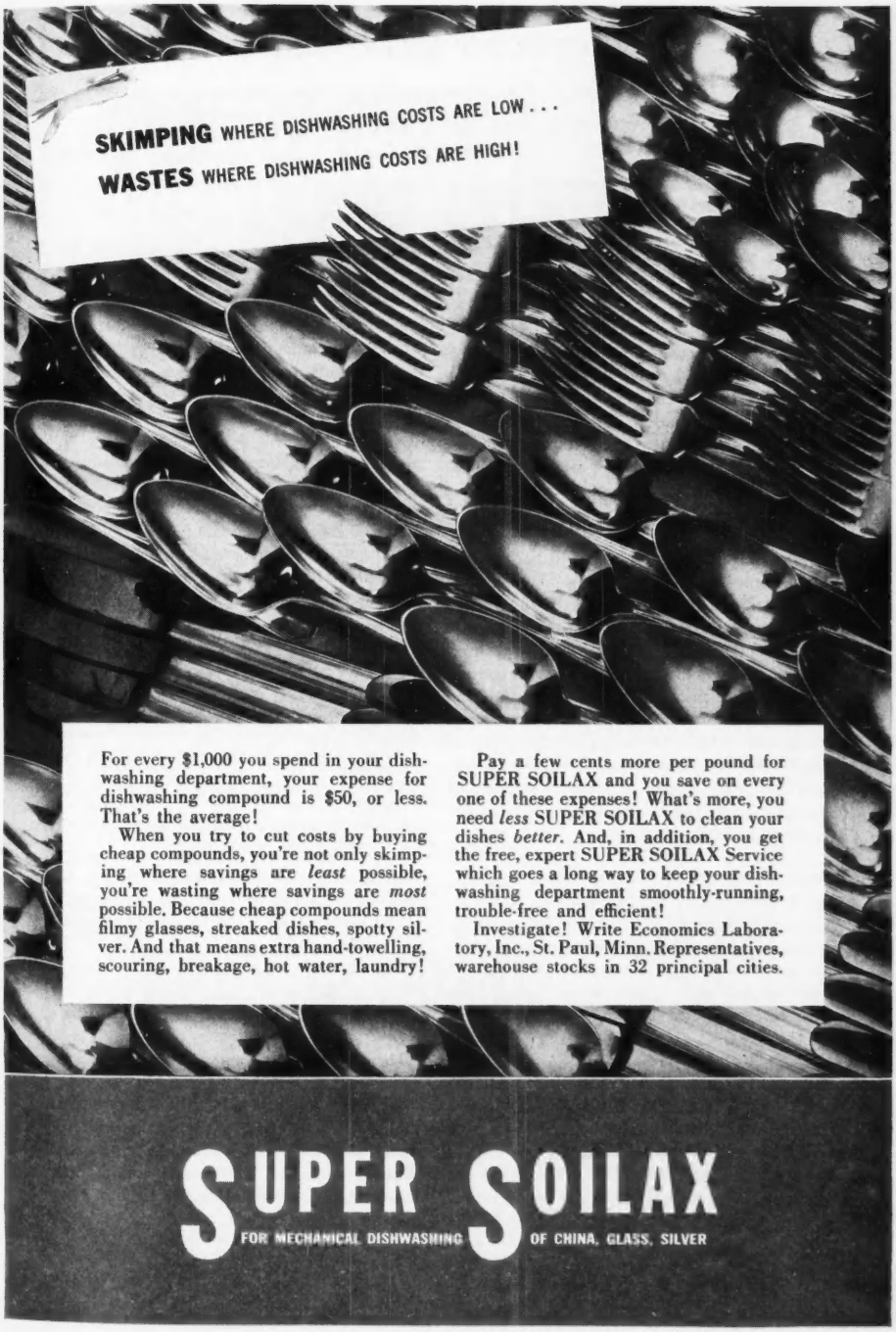
This is an interesting book arranged in question and answer form and embellished with more than 200 helpful illustrations in black and white. Such questions as "What is the difference between black pepper and white pepper? what are shallots? how does garden cress differ from water cress? or a total of 750 like queries, are answered with considerable accuracy and clearness.

The thirty chapters cover all types of fresh, canned, dried and baked foods and food accessories. A complete index denoting the items illustrated, is included.

Vitamin C and Wound Healing

The concept of vitamin C deficiency with regard to difficulties in wound healing is not new, descriptions of scurvy having appeared in the literature since the time of Hippocrates. Richard Walter's account of Lord Anson's "Voyage Around the World" in 1740 vividly describes the effects of scurvy among the crew: "Scars of wounds that had been for many years healed, were forced open . . . one of the invalids . . . who had been wounded fifty years before . . . and had continued well for a great number of years past, yet, on his being attacked by the scurvy, his wounds in the progress of the disease broke out afresh and appeared as though they had never been healed.". . . .

We would emphasize Mason's statement that "the urge to heal is almost as great as the urge to live." Wound healing is affected by many factors, and the nutritional condition of a patient is a most important one. Either to maintain life or to repair tissue there must be a supply of proteins, fats, carbohydrates, minerals, water and vitamins. Periods of inanition or faulty nutrition are likely to deplete the carbohydrates and fat stores and to lower serum protein and vitamin levels. We almost universally supply carbohydrate and salts by routine intravenous administrations, but, generally speaking, if a transfusion is given it is because the hemoglobin and the red blood cell count are low rather than because of a low serum protein, and the vitamins are forgotten entirely. It would seem logical that, if normal healing is to be expected, the ascorbic acid and serum protein levels of the blood plasma ought to be brought to and kept at normal concentration.—*Hartzell, J. B., Winfield, J. M. and Irvin, J. L., Plasma vitamin C and serum protein levels in wound disruption, J. A. M. A., 116: 669, 1941.*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For every $1,000 you spend in your dishwashing department, your expense for dishwashing compound is $50, or less. That's the average!
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CURRENT LITERATURE

American Journal of Digestive Diseases

Vol. 8, January 1941

*The use of vitamin B_1 in diabetes mellitus: A clinical study. A. Trasoff and C. Bordin.—p. 1.
*Banana diet in bacillary dysentery: A proctoscopic study. L. H. Block and A. Tarnowski.—p. 3.
*Urinary excretion of silica in humans following oral administration of magnesium trisilicate. R. C. Page, R. R. Heffner and A. Frey.—p. 13.
*Experimental gastric ulcer in albino rats. K. C. Chen.—p. 28.

VITAMIN B_1 AND DIABETES. In 15 diabetic patients who had been under treatment, vitamin B was administered for periods varying from 9 to 34 weeks: 10 showed no improvement in their carbohydrate utilization; 5, an improvement in carbohydrate tolerance; and 3 improved during vitamin administration and 2 after discontinuation. Beneficent results were probably not due to vitamin B.

BANANA DIET IN DYSENTERY. In 127 patients studied to determine the value of bananas in bacillary dysentery, diets were prescribed according to the age, weight and physical condition of the patients who were divided into 10 different groups: 5 on test diets of variable caloric content and composed principally of bananas; and 5 on control diets without bananas. Observations of symptoms, weight, temperature, appearance of the rectum and sigmoid, and the mortality and morbidity rate of the patients in comparable groups indicate that the use of bananas is advantageous in bacillary dysentery.

SILICA EXCRETION. Urinary silica excretion studies were carried out on 5 healthy, male subjects on regular diets. The urinary excretion of silica varied widely and was proportional to the amount of silica in the diet. There is no evidence that the administration of magnesium trisilicate by mouth has any deleterious effect on the human or animal organism.

GASTRIC ULCER IN RATS. Ulcers not produced simply by a nutritional deficiency can be obtained in the rumen of the stomach of rats with several types of diet if the animal is first starved for a week. The lesions may be caused by the presence of unbuffered acid. The degree of ulceration did not seem to be influenced by the nutritive value of the diet given after the preliminary period of starvation.

American Journal of Diseases of Children

Vol. 61, January 1941

*Amebiasis in infants and children. K. M. Howell and E. W. Knoll.—p. 54.
*Normal blood sugar values in children. C. L. Rudesil and R. A. Henderson.—p. 108.

AMEBIASIS. Amebiasis can occur in infants and children of any age in any locality. It is contracted through contact with an amebic carrier, a low standard of living being a contributing factor. Children have little natural or acquired immunity to amebiasis.

BLOOD SUGAR VALUES. In 288 blood sugar determinations made on 144 nondiabetic children from 2 to 15 years of age, there was no practical difference between fasting and 11 a.m. blood sugars, since both fall within normal limits. Normal fasting blood sugar values ranged from 70 to 105 mg. per 100 cc.

American Journal of the Medical Sciences

Vol. 201, January 1941

*Chlorosis. Essential juvenile iron deficiency anemia. G. Alsted.—p. 1.
*The effects of food combinations upon leukopenic index determinations and upon body temperature. J. F. Hanson.—p. 11.
*The constancy of action of protamine zinc insulin. H. T. Ricketts.—p. 51.
*The effect of smoking tobacco on gastric acidity. I. Ehrenfeld and M. Sturtevant.—p. 81.

CHLOROSIS. Chlorosis is a hypochromic iron deficiency anemia without any demonstrable cause, occurring in young women with a normal gastric function.

LEUKOPENIC INDEX. Leukopenic indices were obtained on 101 foods and 42 combinations of foods. The test is time-consuming and is applicable only to a limited number of foods.

PROTAMINE ZINC INSULIN. In 7 of 8 diabetic patients treated with protamine zinc insulin under carefully controlled conditions, the blood sugar through the daytime and evening hours was essentially the same whether the insulin was given in the morning or at night.

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The booklet contains a discussion of the principles of diabetic feeding, practical tables of food composition expressed in percentages of 100-gram portions, sample menus, and 33 pages of simple, economical and attractive recipes with composition and caloric value of all foods and recipes.

The use of Knox Plain (Sparkling) Gelatine is explained, with examples of how Knox Gelatine can give variety to appetizing "full-sized" meals without interfering appreciably with caloric requirements. (Knox is 85% to 87% protein—entirely free of sugar.) It contains a majority of the food amino acids and has been shown to supplement protein of nearly every variety of food.

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TOBACCO AND GASTRIC ACIDITY. Significant increase in gastric acidity follows smoking under certain test conditions, and is slightly greater in patients with peptic ulcer.

American Journal of Public Health and the Nation's Health

Vol. 31, January 1941

*Etiology of the anemias. C. C. Sturgis.—p. 10.
*Some trends in public housing. L. M. Graves and A. H. Fletcher.—p. 65.

ANEMIAS. All anemias, other than those following hemorrhage, are due to an increased destruction or diminished production of red blood cells or a combination of both. Anemias may be grouped under the broad divisions of iron deficiency anemias, anemias of pregnancy, and macrocytic anemias. Iron deficiency anemias are caused by: the loss of iron as the result of a severe, acute hemorrhage, or chronic blood loss; a reduced intake of iron in the diet; the added demand for iron of growth, pregnancy, and lactation; the faulty absorption of iron from the intestinal tract; and the inhibiting effect of any infection on the relationship between iron and normal hemoglobin synthesis. It is doubtful if a reduction of dietary iron alone will produce a deficiency in the body. In the United States the daily iron intake of an adult varies between 8 and 16 mg. with an average of 12 mg. The additional needs for iron during the periods of active growth are properly ascribed to the augmented total cellular content of the body and the increasing blood volume. Studies show that 54% of all supposedly healthy pregnant women who come to the obstetrical outpatient department have a pathological anemia.

PUBLIC HOUSING. There has been a decided shift in the primary objective of the old PWA Housing Division program and of the U. S. Housing Authority program from one of ending unemployment and stimulating the building industry to one of lower rents within the paying ability of slum dwellers. Health departments should study objectively the social and economic factors responsible for the housing problem.

Archives of Internal Medicine

Vol. 67, January 1941

*Time-activity curves of protamine zinc insulin. H. E. Martin and P. O. Greeley.—p. 194.
Allergy. A review of the literature of 1940. F. M. Rackemann.—p. 207.

PROTAMINE ZINC INSULIN. Time-activity curves of large doses of protamine zinc insulin in the depancreatized dog and in the patient with diabetes show: the slow onset of activity, with delayed peak of activity; the long duration of action, and the relatively small amount of carbohydrate required per hour, as compared with the large total amount of carbohydrate required.

Archives of Pediatrics

Vol. 58, January 1941

*The addition of homogenized vegetables to the diet of the young infant. M. L. Blatt, H. M. Jacobs, J. B. Murphy and M. Zeldes.—p. 40.

HOMOGENIZED VEGETABLES. In 64 infants from 1 to 6 months of age, given homogenized vegetables for various lengths of time in addition to their basic formulas, the hemoglobin and erythrocyte curves paralleled the normal curves in contour except that the lowest drop of hemoglobin was delayed for several weeks. The birth weight was doubled at 4½ months in the 2 groups started on homogenized vegetables before 3 months of age. The height increase was correspondingly rapid. The vegetable was well tolerated and few vegetable fibers were seen in the stools.

British Medical Journal

No. 4175, January 11, 1941

*A survey of nutrition and dental caries in 120 London elementary school children. I. Allen.—p. 44.
Optimum calcium requirement. I. Harris, J. T. Ireland and V. G. James.—p. 49.

No. 4176, January 18, 1941

*Trends in nutrition. J. B. Orr.—p. 73

NUTRITION AND DENTAL CARIES. Good dental structure can be produced by dietary methods, as indicated by a study of 120 elementary school children examined over a 12-month period for dental caries and surface structural tooth defects. The structurally soundest teeth were those of which the greatest part is formed *in utero*. The better the structure, the greater the resistance to dental disease. An improvement in physical condition at ages 5 and 6 was strongly associated with a smaller increase in dental caries.

NUTRITION TRENDS. The improvement of the diet of workmen whose diet was not previously up to standard was followed by an increased out-

FOR LAGGARD SPRING APPETITES

Here's a muffin recipe for your patients that will make the worst "spring fever" appetite sit up and take notice! Molasses ALL-BRAN Muffins, made the good old New England way. And remember that these muffins are beneficial, too. Included in the day's diet, they are as effective as a cereal serving of ALL-BRAN in combating constipation due to lack of "bulk."

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4 cups KELLOGG'S ALL-BRAN	
1 cup molasses	2 eggs
3 cups milk	2 cups flour
2 teaspoons soda	1 teaspoon salt

Combine ALL-BRAN, molasses and milk; let stand for 15 minutes. Add eggs and beat thoroughly. Sift flour with salt and soda; add to first mixture, stirring only until flour disappears. Fill greased muffin pans two-thirds full. Bake in moderately hot oven (400° F.) about 20 minutes.

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put and a reduction in the number of accidents. With some infections, the mortality rate among those on a deficient diet was markedly higher than among those on an adequate diet. Physical symptoms of malnutrition are nearly always accompanied by psychological symptoms. Milk, green vegetables, whole-meal bread and potatoes taken together in sufficient quantity will meet all bodily needs for specific constituents.

Canadian Medical Association Journal

Vol. 44, January 1941

*A comparison of dark adaptation tests on French and English children in a Quebec community. G. C. L. Goss, F. A. Farmer and W. D. McFarlane.—p. 30.
Practical aspects of allergy. A. T. Henderson.—p. 33.

DARK ADAPTATION. The time of dark adaptation was reduced by vitamin A therapy in apparently normal children with long regeneration time, and a perceptible difference was found between the boys and the girls. Compared to the English children, a high percentage of French children showed a long regeneration time.

Hygeia

Vol. 19, January 1941

*Foods that provide vitamin B_1.—p. 44.
*Super vegetables for health. S. R. Winters.—p. 46.

VITAMIN B_1 FOODS. Vitamin B_1 is probably the vitamin most apt to be low in the American diet. Diets of children should provide at least 200 I.U. of vitamin B_1 daily, and that of older children and adults not less than 300 I.U. Whole wheat products, oatmeal, brown rice, eggs, lean meats, potatoes, beans, peas and peanuts provide good amounts of vitamin B_1. One pork chop will supply the minimal daily requirement or about 300 I.U.

SUPER VEGETABLES. Most nutritional anemia caused by eating food grown in poor soils occurs among low-income rural groups. Many are compelled to live on home-grown products for financial reasons.

Journal of the American Dental Association

Vol. 28, January 1941

*Vitamin C deficiency, a cause of periodontal disease. L. J. Fitzsimmons.—p. 76.
The influence of immunologic factors on dental caries. T. J. Hill.—p. 109.

VITAMIN C DEFICIENCY. A high percentage of those with periodontal disease eat an acid-ash diet which contains little vitamin C and is composed of soft, non-detergent foods.

Journal of the American Medical Association

Vol. 116, January 4, 1941

The child-parent relationship. C. Sweet, L. R. Jacobus and H. E. Stafford.—p. 38.
*Health of young men under selective service. Editorial.—p. 54.

Vol. 116, January 11, 1941

Cheilitis from sensitivity to oil of cinnamon in bubble gum. J. Miller.—p. 131.
*Vitamin K and cholemic bleeding. Editorial.—p. 143.

Vol. 116, January 18, 1941

*Therapeutic significance of plasma protein replacement in severe burns. R. Elman.—p. 213.
*"Vitamin sweets". Editorial.—p. 232.
*A deficiency disease in foxes. Current comment.—p. 234.

HEALTH UNDER SELECTIVE SERVICE. Among the causes for rejection of 430 men examined for selective service, 26 were underweight, 11 overweight, 2 underheight; defective vision was the primary cause of 74 rejections, diseases of the heart for 66, 28 for infantile paralysis. The leading cause of rejection was teeth, 88 being rejected because of insufficient teeth while 20 had insufficient teeth as a secondary cause of rejection. The sample of those rejected out of 1643 examined does not show any specific deterioration in the population. Comparison with previous records indicates that the general health of the nation is good. Our knowledge of diet, our greatly increased understanding of many diseases of the glands and the improvement in child health shows that physically we are a far better nation now than in 1917.

VITAMIN K AND CHOLEMIC BLEEDING. Vitamin K is widely distributed in nature. Concentrates have been prepared from alfalfa and from putrefied fish meal. Man obtains vitamin K from the diet and from bacterial activity in the intestine. A deficiency develops when absorption from the intestine is interrupted. Without bile or bile salts the vitamin cannot be absorbed. The liver is the seat of formation of prothrombin and of the synthesis of vitamin K. Vitamin K is ineffective in the presence of cirrhosis of the liver or a severe hepatitis. It is without value in hemophilia or in thrombocytopenic purpura,

The Newer Concepts of Meat in Nutrition

Meat

AND THE SIGNIFICANCE OF THE BIOLOGIC VALUE OF ITS PROTEIN

for the Child

AN ADEQUATE supply of protein is one of the important requirements for optimum growth. The growing organism utilizes protein not only for wear and tear replacement, but also for adding to the bulk of the tissues. Proportionately, the amount of protein required by children is appreciably larger than that needed by adults. According to one author,[1] children 2 to 5 years of age should receive 3.0 Gm. of protein per kilogram of body weight, and children 6 to 12 years old, 2.5 Gm.

The protein of meat contains the ten amino acids considered essential for growth: arginine, histidine, isoleucine, methionine, leucine, lysine, phenylalanine, threonine, tryptophane, and valine.[2] It is thoroughly adequate and of high biologic value[3]: it satisfies all of the protein requirements for growth and maintenance. The high coefficient of digestibility of meat assures the utilization of its protein. For these reasons, and also because of its appetite appeal, many pediatrists recommend meat and meat products at a relatively early age.

1. Kugelmass, I. N: The Newer Nutrition in Pediatric Practice, Philadelphia, J. B. Lippincott Company, 1940.
2. Rose, W. C.: The Nutritive Significance of the Amino Acids and Certain Related Compounds, Science *86*:298, 1937; The Nutritive Significance of the Amino Acids, Physiol. Rev. *18*:109, 1938.
3. Mitchell, H. H., and Hamilton, T. S.: The Biochemistry of the Amino Acids, New York, The Chemical Catalog Company, 1929.

The Seal of Acceptance denotes that the statements made in this advertisement are acceptable to the Council on Foods and Nutrition of the American Medical Association.

American Meat Institute

CHICAGO

since in these cases there is no deficiency in prothrombin or vitamin K.

PLASMA PROTEIN REPLACEMENT IN BURNS. The general manifestations of a severe burn develop rapidly. Replacement of the plasma protein by transfusion is essential to maintain the circulation and to relieve the concentration of the blood. A high protein diet is necessary as soon as nourishment by mouth is possible.

"VITAMIN SWEETS". The Council on Foods and Nutrition has not adopted the proposal that vitamins be incorporated in "sweets" as far as the American market is concerned.

DEFICIENCY DISEASE IN FOXES. A disease common on fox ranches called "Chastek paralysis" is characterized by a preliminary period of anorexia followed by the rapid development of weakness, ataxia and spastic paralysis. This disease is caused by eating fish. The consumption of fish somehow produces a B_1 avitaminosis. Some substance or substances in whole fresh fish and in alcoholic liquors appear to be specifically destructive to vitamin B_1.

Journal of Biological Chemistry

Vol. 137, January 1941

*Anemia from lysine deficiency in deaminized casein. A. G. Hogan, E. L. Powell and R. E. Guerrant.—p. 41.

*The urinary pyruvate in thiamine deficiency. H. A. Harper and H. J. Deuel.—p. 233.

*The deposition of lipids in various parts of the central nervous system of the developing rat. B. A. Fries, C. Entenman, G. W. Changus and I. L. Chaikoff.—p. 303.

The riboflavin content of blood and urine. F. M. Strong, R. E. Feeney, B. Mobre and H. T. Parsons.—p. 363.

LYSINE AND ANEMIA. Lysine is the antianemic agent in the deaminized casein-anemia syndrome. Deaminized casein is not seriously deficient in any essential amino-acid other than lysine. If deaminized casein is the only protein in the diet and other conditions are optimal, the lysine requirement is increased 2 to 4 times the normal.

URINARY PYRUVATE EXCRETION. The excretion of pyruvate in the urine of rats increases as the depletion of the thiamin reserve proceeds. The level of excretion of pyruvate is related to the state of alimentation of the animal during the period of the urine collection. Urinary pyruvate appears to be higher in males than in females.

LIPID DEPOSITION IN NERVOUS SYSTEM. The deposition of cholesterol, phospholipid, and total fatty acids was studied in various divisions of the central nervous system of the rat from birth till the time it attained a weight of 300 gm. In each part of the central nervous system the maximal rate of deposition occurred during the time between birth and the time the rat attains a weight of 50 gm. The cord contained the highest amounts of cholesterol, phospholipid, and total fatty acids. The pattern with respect to the amounts of cholesterol, phospholipid, and total fatty acids contained in each division of the central nervous system from birth till full growth is maintained relatively constant.

Journal of the Missouri State Medical Association

Vol. 38, January 1941

*Diabetes. Advances in treatment. C. M. MacBryde.—p. 3.

DIABETES. The newer knowledge of diabetic regulation offers more to the patient and places greater responsibility upon the physician. The diet should be adjusted to the patient regardless of whether it be low, moderate or high in carbohydrate.

Journal of Nutrition

Vol. 21, January 1941

The bioassay of vitamin K. S. Ansbacher.—p. 1.

*The effect of the quantity of basal food intake upon the utilization of vitamin A. K. D. Muelder and E. Kelley.—p. 13.

*On the manner of acquisition of fluorine by mature teeth. M. W. Perry and W. D. Armstrong.—p. 35.

*Nutritional requirements during the latter half of life. C. M. McCay, L. A. Maynard, G. Sperling and H. S. Osgood.—p. 45.

*Severe calcium deficiency in growing rats. I. Symptoms and pathology. M. D. D. Boelter and D. M. Greenberg.—p. 61.

Severe calcium deficiency in growing rats. II. Changes in chemical composition. M. D. D. Boelter and D. M. Greenberg.—p. 75.

*Studies on riboflavin and thiamin in the rumen content of cattle. C. H. Hunt, C. H. Kick, E. W. Burroughs, R. M. Bethke, A. F. Schalk and P. Gerlaugh.—p. 85.

A study of the need for cobalt in dogs on milk diets. D. V. Frost, C. A. Elvehjem and E. B. Hart.—p. 93.

FOOD INTAKE AND VITAMIN A. The caloric intake was responsible for a greater proportion

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IN MODERN NUTRITION

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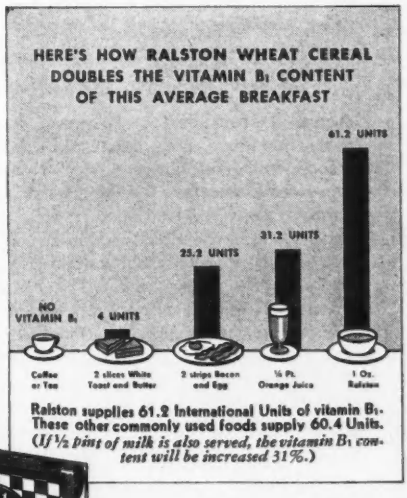
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of the gain in weight of rats during a 4-week period than was the unitage of vitamin A administered. The quantity of basal food intake showed no statistically significant influence upon incidence of "abscessed" areas.

FLUORINE UPTAKE BY TEETH. The molar teeth of rats fed an ordinary diet contain more fluorine in the dentin than in the enamel but the reverse was true in the incisors. The fluorine content of the dentin of molar teeth of mature rats is not increased when the animals are given water containing 20 p.p.m. of fluorine. Secondary enrichment of dentin with fluorine occurs after its calcification and does not continue indefinitely.

NUTRITION IN LATTER HALF OF LIFE. The protein level of the diet during the latter half of a rat's life does not affect the life-span significantly when the protein constitutes 8 to 30% of the diet. At higher levels of protein intake, the non-protein nitrogen of the blood increases and the heart and kidneys become larger. Rats kept underweight by restriction of calories outlive those allowed to fatten. Exercise is of minor importance in comparison with body fatness. Optimal conditions for a long life proved to be thin bodies, exercise, and a low protein diet with the protein provided by liver.

CALCIUM DEFICIENCY IN GROWING RATS. Growing rats reared on a synthetic diet containing about 10 mg. calcium per 100 gm. food developed a condition characterized by retardation of growth, decreased food consumption, high basal metabolic rate, reduced activity and sensitivity, osteoporosis or low calcium rickets, abnormal posture and gait, susceptibility to internal hemorrhage, a large increase in the volume of the urine and reduced span of life. They become normal in appearance, reactions, and chemical composition a few weeks after they are supplied food with an adequate amount of calcium. Injection of calcium salts almost invariably causes the death of the animal within a few hours.

RIBOFLAVIN AND THIAMIN. Riboflavin is synthesized in the rumen of the steer when the animal is fed a ration of yellow corn, alfalfa hay, and a protein supplement.

Journal of Pediatrics

Vol. 18, January 1941

*Diet in malnutrition and celiac disease. G. Stearns, P. C. Jeans, R. Catherwood and J. B. McKinley.—p. 12.
Obesity in childhood and endocrine treatment. H. Bruch.—p. 36.
*Creatine and creatinine metabolism in hypothyroidism. C. Fan.—p. 57.

DIET IN MALNUTRITION AND CELIAC DISEASE. Four types of diets were used in a study of weight gain in undernourished children, *i.e.*: a normal diet; a fat diet; a diet low in both fat and complex carbohydrates, calorically dependent upon protein and dextrose; and a fourth diet with ripe bananas substituted for the equivalent amount of dextrose. Weight gains were most rapid with the dextrose and banana diets even at a lower caloric intake than the other diets. The fat diet necessitated largest caloric intake in order to maintain consistent weight gain. Studies of calcium, phosphorus, and nitrogen retention confirm the results of the studies of the weight gain and show that diets made up of protein and simple carbohydrates provide intake levels of these substances such that good body tissue can be built rapidly.

CREATINE AND CREATININE METABOLISM. In 3 cases of hypothyroidism the level of blood cholesterol gave a general indication of the therapeutic effect of thyroid, but did not serve as a reliable quantitative indicator of the basal metabolic rate. The degree of creatinuria did not parallel the level of the basal metabolic rate, either before or after thyroid therapy. The urinary creatine showed a definite tendency to decrease as the thyroid therapy was continued, especially when the subject was on a meat-free diet. The constancy of daily creatinine excretion is only relative.

Military Surgeon

January 1941

*Nutrition and national defense. M. L. Drazin.—p. 39.

FEEDING THE ARMY. Attention is called to the use of the soy bean food concentrates in the German Army, particularly for parachute troops and during "blitzkrieg" advances. Germany's ability to maintain food supplies indicates that her resistance will not be broken on the nutrition front as it was in 1914–18. The several rations

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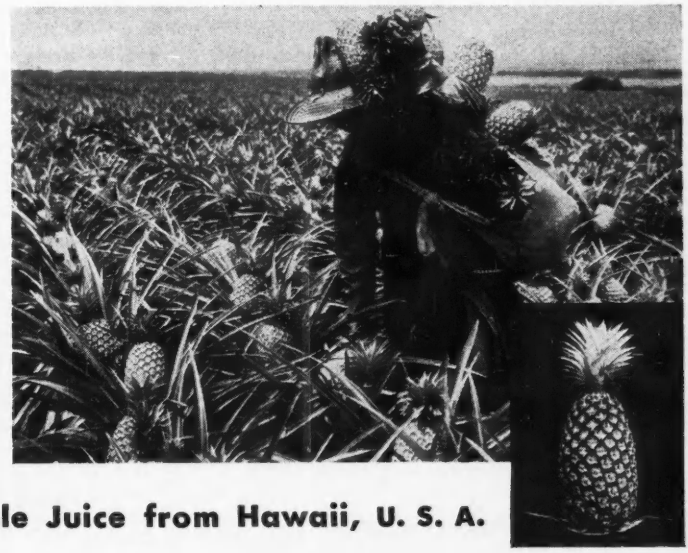

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provided in the U. S. Army are described and the author concludes that the garrison ration is adequate except for vitamin D and calcium; travel and field rations are deficient in some vitamins and calcium. Suggestions are made to improve the rations as they now stand and a list of 43 references, many of which concern specifically the feeding of soldiers, is included.

Northwest Medicine

Vol. 40, February 1941

*Anemia in college women. H. B. Pryor and M. Ferguson.—p. 58.

ANEMIA IN COLLEGE WOMEN. Simple achromic anemia is encountered in college women more commonly than previous statistics indicate, achromic anemia being just as frequent as the secondary type. Good results in blood building were obtained with simple iron tonic therapy. Fifty-four per cent of the young women with hemoglobins below 70% complained of dysmenorrhea and 63% were classified as slender-built. Certain constitutional inadequacies may play a part in the development of anemias.

Pennsylvania Medical Journal

Vol. 44, January 1941

*Recent studies on the diagnosis of hypothyroidism in children. L. Wilkins.—p. 429.

HYPOTHYROIDISM. When marked thyroid deficiency has existed over a considerable span of time during the early years of childhood, it causes cretinism or juvenile hypothyroidism. Structural changes which are most characteristic and readily recognized are caused by defective growth and development of the skeleton. Mental sluggishness and physical inactivity are shown to some degree by all patients with hypothyroidism.

Public Health Reports

Vol. 56, January 3, 1941

*The influence of dietary protein on the toxicity of sulfanilamide. M. I. Smith, R. D. Lillie and E. F. Stohlman.—p. 24.

Vol. 56, January 10, 1941

Summary of physical findings on men drafted in the World War. R. H. Britten and G. St. J. Perrott.—p. 41.

DIETARY PROTEIN AND TOXICITY OF SULFANILAMIDE. A low protein diet (7%) increased the susceptibility of rats to orally administered sulfanilamide by increasing the mortality rate and the incidence of anemia as compared with similarly treated rats on a diet containing 30% protein. Supplementing the low protein diet with cystine to the level contained in the 30% protein diet had no effect, while a similar supplement of cystine plus methionine decreased the mortality rate but not the incidence of anemia. Examination of the blood sulfanilamide levels suggests the possibility of greater retention of the drug in animals on the low protein diet. A slight focal interstitial nephritis was present in about a third of the sulfanilamide-treated animals, irrespective of diet.

Science

Vol. 93, January 3, 1941

The excretion of specific fluorescent substances in the urine in pellagra. L. E. Holt and V. A. Najjar.—p. 20.

*Effect of alcohol on vitamin A content of blood in human subjects. S. W. Clausen, B. B. Breese, W. S. Baum, A. B. McCoord and J. O. Rydeen.—p. 21.

Vol. 93, January 10, 1941

Vitamin L and dextrin diet. W. Nakahara, F. Inukai and S. Ugami.—p. 39.

Vol. 93, January 24, 1941

*The soybean crop in the United States. A. W. von Struve.—p. 86.

ALCOHOL AND VITAMIN A IN BLOOD. The ingestion of alcohol raises the vitamin A content of the blood of man, probably due to a shift of vitamin A from other tissues of the body, notably the liver, to the blood. The amount of alcohol ingested, the degree of saturation of the body with vitamin A and tolerance to alcohol are important factors.

SOY BEAN CROP IN UNITED STATES. Production and processing of the soy bean has grown to a multi-million-dollar industry. The soy bean is useful as food for humans and for live stock and in manufacture of useful goods. Soy bean oil is used primarily in shortening and oleomargarin. Lecithin is derived from soy bean oil and is used as an emulsifier and in the manufacture of candies, chocolate, cocoa, margarin, medicines and in dyeing of textiles. Dried soy bean flour is used in baked products, breakfast foods, candies, diabetic foods, health drinks, ice cream cones, ice cream powder, infant foods, macaroni products and as filler in meat products. Vegetable milk derived from dried soy beans is

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converted into casein which is used in paints, size for paper, textile dressing and waterproofing. The meal is used for foods, fertilizers and manufacture of glue and celluloid substitutes. More than 100 named varieties of soy beans are grown in the United States.

Southern Medical Journal

Vol. 34, January 1941

*Interrelation between the vitamin B complex and the anterior lobe of the pituitary gland. D. C. Sutton.—p. 47.

Hepatic disease: clinical aspects. C. W. Dowden.—p. 51.
The diagnosis and treatment of the purpuric diseases. R. R. Kracke.—p. 56.

VITAMIN B AND ANTERIOR PITUITARY. An extract of the anterior lobe of the pituitary gland will cause recovery of pellagra lesions when they have failed to respond to nicotinic acid, riboflavin, parenteral liver and adequate diet. The hormones or a hormone of the anterior lobe of the pituitary gland may be essential to the utilization of the vitamin B complex.

INSTITUTION MANAGEMENT

Buildings and Building Management

Vol. 41, January 1941

*Decorating for light.—p. 36.
Office lighting costs.—p. 39.
Wiring data for 1941. C. O. Hull and T. A. Gilly.—p. 40.
*Improving elevator service.—p. 48.
*Systematic cleaning.—p. 51.
*Floor specifications.—p. 64.

Vol. 41, February 1941

*When talk means trouble. L. R. Bloomenthal.—p. 13.
Average operating costs.—p. 15.
*Zeon lighting of offices. R. W. Kidwiler.—p. 19.
A simplified time ticket.—p. 25.
*Telephone technique. J. C. Alexander.—p. 28.
Maintaining linoleum floors. R. Jarden.—p. 29.
Common causes of accidents, a charted report.—p. 30.

LIGHTING MAINTENANCE. Economical illumination is secured by replacing bulbs of depreciated foot-candles, cleaning luminaires and renewing light-reflecting surfaces on a predetermined economic schedule. In indirect or semi-indirect lighting illumination will be approximately proportional to the reflection factor; as the ceiling darkens, so does the office. Since the human eye is not a reliable judge of this factor, it must be determined by precision instruments. A chart giving the painting cost in cents per square foot and lighting cost in cents per square foot per year and with ceiling depreciation five points (85–80%) per year, provides a dependable method for determining the most economical interval for washing or repainting ceilings. Another chart shows the results of comprehensive tests of reflection values of surfaces painted with 21 interior color variations, and using both mercury and Mazda lamps. Basic standard of comparison was a surface of magnesium carbonate having a reflection coefficient of 98%. A new white surface reflects about 85% of the light. The Mazda light gave a higher reflection with suntone, light buff, interior peach, interior ivory, blossom pink, orchid maize tan and beige satin finishes, while the mercury light gave better results with the other thirteen colored surface finishes. Dark colored or soiled surfaces absorb rather than reflect light. For ceilings, light colors, white, ivory or cream, and a flat finish are preferable; for sidewalls, cool colors; blues, grays, greens make a room appear larger than one with walls of tan or other warm colors. Studies indicate that 10% or more increase in the reflection coefficient after washing ceiling and walls is not uncommon. Loss of light from maintenance neglect is due to operation of lamps past their prime, empty sockets and neglected burn-outs, dirty walls and ceilings, wrong combination of lamps and reflectors, under-voltage operation of lamps, and dirty lamps and equipment.

ELEVATOR SERVICE. Chart portrays the work schedules for starter, assistant starter and 8 operators, on duty 7½–8 hours per week-day exclusive of Saturdays and not counting relief and lunch periods. Work schedules are keyed to the hours at the top of the chart showing irregular peaks representing the total passenger traffic and a line representing the number of elevators in operation at various times of the day.

CLEANING. Specialization of cleaning assignments and an increased use of modern maintenance materials and equipment lower cleaning costs. In office building maintenance, one-third of every operating dollar goes into cleaning and 28 of every 30 cents spent for cleaning goes into labor with only 2 cents for cleaning materials and

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equipment. Manual washing of walls is done at the rate of 150–200 sq. ft. per hour, whereas a machine operator should wash 3000–5000 sq. ft. per day. A good worker should be able to wash 40–50 windows per day; contract washers generally average 50–60 windows per man per day; 16 lighting fixtures washed per hour is satisfactory but varies with type of fixtures and location. In mopping floors, a 2-man team should be able to clean 3500–4000 sq. ft. per hour. Good workmen should be able to clean and polish about 650 sq. ft. of marble per hour. A 2-man team should be able to apply wax and machine brush 700–800 sq. ft. per hour working on linoleum, asphalt tile, cork and rubber tile.

FLOOR SPECIFICATIONS AND MAINTENANCE. Describes varieties of each type floor surface, giving uses, characteristics, advantages, installation, maintenance and repair procedures for asphalt tile, concrete, cork tile, linoleum, marble rubber tile, terrazzo, hard tiles, and wood.

EMPLOYEE REFERENCES. Article shows the necessity of correcting employee in private in a restrained manner. Anything discussed in private conversation cannot be held against speaker or building corporation. False accusation against another person is slanderous if spoken, or libelous if put in a letter of reference but not in interdepartmental correspondence.

ZEON LIGHTING. New Zeon lighting gives a minimum of 25-ft. candle illumination on desks at an actual metered consumption of 1.8 watts per square foot of space.

TELEPHONE TECHNIQUE. A good telephone "personality" largely depends upon the voice and how it is used. Speak directly into mouthpiece with lips not more than half an inch away, pronounce words carefully, use a pleasant, well-modulated tone, never be abrupt or impatient or speak with anything in your mouth, and remember that a cordial voice on the telephone is as desirable as it is in personal conversation.

Chain Store Age

Vol. 17, February 1941

Organizing to meet rising costs of doing business. Part III. R. A. Hohfeler.—p. 14.
Customer's buying habits revealed by year 'round survey. F. E. Landau.—p. 19.
*New equipment and services.—p. 26.

NEW EQUIPMENT. The Sherwin-Williams Company announces a new synthetic mill white said to cover with one coat and dry overnight to a hard tile-like surface. A new finish called "Kem-Save-Lite" is designed for use where conditions require maximum durability, faster drying, and sanitary washing surfaces. A new "Miracle Breeze" circulating fan, equipped with a "breeze director" which eliminates drafts, is made by Victor Electric Produce Company. A new scale manufactured by the Toledo Scale Company and adapted for weighing fruits and vegetables, computes the correct price automatically and the accompanying computing chart provides a comprehensible price and weighing range per pound.

Food Industries

Vol. 13, February 1941

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California desert becomes date oasis. A. R. Boone.—p. 40.
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*Effect of smoking on tenderness of Canadian bacon.—p. 92.
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ESSENTIAL OILS AND FLAVORS. Blockades of various countries have made oil and flavor importers turn to western hemisphere products. Increasing amounts of vanilla beans will be available from Mexico. Although chocolate is still easy to obtain, since shipments of kola nuts and cacao beans from South America are still ariving, supplies from India and East Africa have been cut off. Domestic flavoring plants now being developed are fruit flavors, almonds,

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MODERN DIET AUTHORITIES recognize that bread is one of the best sources of food-energy you can give a child.

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IN our nation's drive towards greater national strength, physical fitness is more important than ever. We are fortunate that bread—so easy and economical to buy—can contribute so many valuable essentials to a well-balanced diet.

Bread is an abundant source of food-energy—the largest food need of the body. Made with milk, it provides proteins of high biological value and valuable minerals, including calcium and phosphorus.

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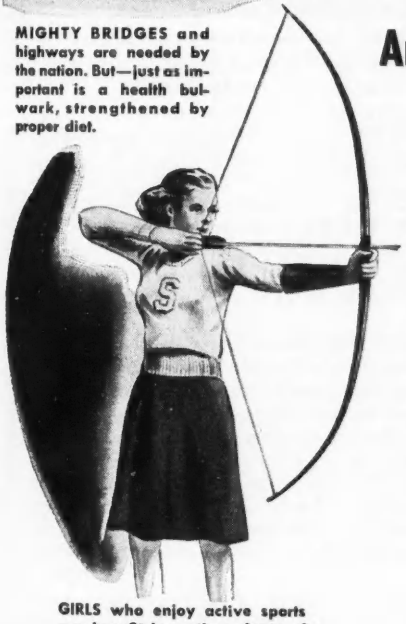
For further information about Bread, write to the Department of Nutrition, American Institute of Baking, 10 Rockefeller Plaza, New York, N. Y.



GIRLS who enjoy active sports can benefit by eating plenty of bread . . . to help supply sustained food-energy needed for endurance.

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The modern bakers' bread, made with milk, contains, in almost ideal proportions, both muscle-building food and energy food . . . contributes valuable minerals, including calcium and phosphorus . . . and is nearly 100% digestible.

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pistachio, cocoanut, horseradish, garlic, spearmint, sweet birch, sassafras and wintergreen. Although it takes 2 or 3 years for crops to be grown and extracted, on the whole we are not badly off for supplies of flavors, flavor bases, and essential oils.

DRY SUGAR IN CANNED FOODS. Commercial attempts to sweeten syrup-packed foods by adding dry sugar to the empty can, followed by the addition of food and water to complete the fill of the can, have resulted in swell and flat-sour spoilage. Dry sugar at the bottom of the can does not completely dissolve during heat sterilization process. The severity of a given heat treatment is less in cans packed with dry sugar than in those in which sugar is added in syrup form. Spores of spoilage organism show increased thermal death time with increase of sugar concentration of syrups in which they are suspended. Since concentrations of sugar in this range are shown to occur in packing foods with dry sugar, this increase in thermal death time and decrease in sterilizing value of the process inherent with this method of packing makes its use extremely hazardous unless some means of agitation is provided to ensure solution of the sugar and thorough mixing of the syrup within the can before processing.

SHIFTING MARKET. According to statistical census figures for food-store sales and prepared-meal sales for 1929–39, the trend of the food dollar is toward the ready prepared rather than the home-cooked meal. In 1929, the food stores received 83.8% of the retail food dollar, 74.25% in 1939; prepared meals accounted for 16.4% in 1929 and 25.75% in 1939.

PAPER CANS. The "Bandcan," manufactured by Williams Container Corporation, New York, is a paper-walled can with a metal top and bottom, which can withstand temperatures as high as 360°F. and internal pressures of 105 pounds per square inch. The use of this container may effect a saving of 15–25% over all-metal containers of similar size.

PECTIN IN FREEZING FRUITS. In testing the application of pectin in the prefreezing treatment of peaches, contradictory results were obtained with three varieties: Early Redbird (white), Delicious (white), and Elberta (yellow). Low-methoxyl pectins, small amounts of acid, cane sugar alone and pectin alone, were used. Attractiveness and general appearance were taken as the guide in grading the samples. The quantity of pectin required varied with the grade, but the most advantageous combination was found to be one part pectin and 10 parts sugar per 100 parts sliced peaches. The use of pectin with peaches gave indefinite and contradictory results, but it is suggested that low-methoxyl pectins be used with white-fleshed and high-methoxyl pectins with yellow-fleshed peaches.

EUROPE SAVES TIN. The British have banned the use of containers made of "controlled materials" (tin plate, tinned sheet, black plate, silver-finished plate, terneplate, terne sheet, lead-coated sheet, black-coated sheet or galvanized sheet) for 44 types of commodities, some of which are listed. Retailers have received instructions to return cans when the contents are emptied. Through these restrictions and others listed the Minister of Supply hopes to save 50,000 tons of tin plate and sheet steel annually. The restrictions in Germany and Italy are also described.

LABORATORY SPRAY DRYER. Describes a laboratory spray dryer for preparing milk powder, drying egg yolk, blood corpuscles, and grass juice. The dryer obtains a fine mist with a pressure of only 2 lb. per square inch applied to both the milk and air jet.

CANNED SAUERKRAUT. The major factors in the quality of canned sauerkraut are total acid, volatile acid, alcohol, vitamin C, and salt content. High-grade and low-grade kraut are judged by tests and comparison of results.

BROWNING EVAPORATED MILK. Autoclaved evaporated milk takes on a brown color which has been attributed to caramelization of lactose and reactions between lactose and milk proteins. A study of the chemical factors involved shows that the color results from caramelization of lactose. Soluble phosphates can influence color change if phosphate dissolves in, or is precipitated from milk, but the natural phosphate concentration is too low to have a definite effect.

DEAERATED MILK. Formation of bitter flavor in milk, due to acidity produced by lipase acting

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on the fat, is greater when the milk is deaerated. Air or oxygen naturally dissolved in the milk tends to inactivate the lipase, the degree of inactivation increasing with the temperature. Dissolved copper (2 to 10 parts per million) also inactivates lipase in normal milk but has no effect in deaerated milk.

SALTED CREAM. If salt is added to cream at the rate of 10–13% immediately after separating, the cream will not become second grade in 10 days at 60–70°F., or in 5 days at 82–90°F. Butter made from it will score 2–5 points higher than if salt were not used, and there will not be over 2½% salt in the butter. The salt also keeps down acidity, prevents protein decompositions, lowers bacterial count, and alters the types of bacteria developing.

PASTEURIZED MILK LIMBURGER. Pasteurization improves the quality of cheese if the milk is of low grade. If the milk is of high grade, it increases yield and diminishes the loss of fat in the whey. The differences involved in using pasteurized milk for cheese are discussed and the procedure described.

FROZEN POULTRY STORAGE. Tests were made with frozen poultry in a special moisture-proof container which prevents surface drying and reduces "freezer burn". Prompt freezing after slaughter and sanitation are important. Where surface drying was prevented, rancidity became the first spoilage factor but was held in check until past the usual storage time in birds stored 5–6 weeks at 32°F. and 27 weeks at 9.4°F.

SOY BEAN OIL ANTIOXIDANTS. Refined soy bean oil is more sensitive to oxidation than the raw oil. If one per cent of the unsaponifiable matter extracted is returned to the refined oil, the treated oil becomes more stable than that in the raw state. To retain its potency, the unsaponifiable oil must be dried in an atmosphere of nitrogen at a temperature below 140°F.

DISTEARIN FOR MARGARIN. If free stearic acid is directly esterfied with glycerol, the yield of monostearin is low (about 20%) even at high esterification temperatures. When the same esterification conditions were applied to commercial stearin, a product with a high proportion of distearin was obtained. This product has the exceptionally high emulsifying power which is useful in manufacturing products like margarin.

QUALITY OF MEAT. The proportions of muscle, fat, and bone in meat animals are determined by the age of the animal and the nutrition plane on which it was raised. Size of muscle fiber bundles is the main factor in tenderness. Flavor and color are closely associated since color is imparted by hemoglobin. Color and consistency of fat are important factors in meat quality. Diet of the animal has much to do with the quality as well as quantity of fat. Carbohydrate feeds give firmer, higher melting body fat than do fatty feeds.

CANADIAN BACON. Toughness of Canadian Wiltshire bacon from different packing plants varies widely. Tests showed that salt and moisture content and time interval between curing and testing do not appear to be factors in toughness. Acidity or alkalinity of pickle liquors influences tenderness as does temperature; 140, 158 and 176 degrees F. had a definite tenderizing effect with maximum toughness developing at 122°F.

FOOD FROM GRASS. A procedure is described whereby a protein concentrate, also containing carbohydrates, may be prepared from grass and other green leafy crops.

CALCIUM FOR POTATOES. Sloughing in potatoes may be controlled by the addition of sufficient calcium to the water to keep the pectin in an insoluble form when potatoes are boiled.

Horwath Hotel Accountant

Vol. 21, February 1941

Army Ordnance plant in Ohio.—p. 1.
*Menu prices.—p. 2.
*One hotel's prices.—p. 2.
*Food and beverage costs.—p. 3.
*Restaurant staffs.—p. 8.

MENU PRICES. With the upward trend of market prices and the increase in pay rates and social security taxes, menus must be priced in accordance with economic changes.

FOOD PRICES RISE. A New York City transient hotel compared prices for certain food items on January 6, 1941 with those for articles of the

SPRING FASHION NOTE—WELL-DRESSED MENUS ARE WEARING PLENTY OF MOULDED SALADS!

Moulded Ham and Cheese Salad Plate

A grand combination of diced ham and cheese—a dash of lemon juice and mustard—a bit of onion and parsley—all held together in a savory aspic, made up in no time with Royal Salad Gelatin (Aspic).

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The recipe for this Moulded Ham and Cheese Salad Plate is yours just for the asking together with other fine spring recipes planned for 48 servings or more. Just fill in the order blank below for your free set.

Serve these light, wholesome, jellied salads often this spring—and make them all the thrifty, easy way with Royal Salad Gelatin (Aspic).

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Royal Salad Gelatin (Aspic) helps you create attractive, low-cost dishes. It makes delicious gelatin salads and jellied soups. It enriches the flavor of other soups, gravies, and sauces.

P. S. Royal Salad Gelatin (Aspic) is just *one* of the Royal family! Don't forget the seven luscious Royal Gelatin flavors—and the three creamy Royal Arrowroot Puddings!

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same grade and quality on January 8, 1940. There were rises in 21 out of 24 items. Foods in which the rise was most noticeable were prime short ribs, prime ribs, saddles of lamb, 3 lb. chickens, sliced bacon, boiling eggs, No. 1 white eggs, California oranges 220's, celery 36's. There was a decrease in shortening, flour and sugar.

FOOD COSTS. In 1940 the average food cost per dollar was reduced 1% although the wholesale food price index was practically unchanged from that of 1939. The 6% increase in hotel food sales was the factor in this good showing.

RESTAURANT STAFFS. The proper number of employees for a restaurant varies with the volume of sales, type and standards of the place, the physical layout and other factors. A tabulation of the ratio of payroll and distribution of employees is given for two hotels showing a 5 and 8% profit. While the sales of both organizations are similar, there is a decided difference in the number of service employees hired.

Hospital Management

Vol. 51, January 1941

*Three-point program will help solve food problems in 1941. A. H. Scheidt.—p. 48.
*Watercress for flavor and therapeutics. F. Brobeck.—p. 51.
*Dietary values of the cranberry. J. A. Toby.—p. 54.

FOOD PROBLEMS. Three major means of controlling food expenditures in a period of rising prices are effected by substituting less expensive but equally nutritious foods; breaking down food costs among 10 listed food items in sequence of highest to lowest expenditure in the budget, as meats, dairy products, vegetables, fruits, etc.; and determining which foods have greatest influence on food cost and keeping up-to-date records of their price trends. Table shows distribution of the food dollar.

WATERCRESS. Cultivation and production of watercress now under supervision of Food and Drug Act makes it available to hospital patients. Watercress contains iodine, iron and salts. Recipe and attractive service for watercress soup are given.

DIETARY VALUE OF CRANBERRY. Cranberries rank high in vitamin C concentrate, fair in vitamin A, and contain valuable minerals, iron, calcium, and iodine. The pectin content in cranberries helps maintain proper intestinal hygiene and tenderizes meats if cooked with them.

Hospitals

Vol. 15, February 1941

*Organization and administration of hospital dietetics department. M. M. Harrington.—p. 73.
*Price trends of hospital commodities. McGill Commodity Service, Inc.—p. 88.
*Nutritional study of hospital diets. T. T. Mackie and D. DeHart.—p. 106.

HOSPITAL DIETETIC DEPARTMENT. Discusses problems of menu planning, purchasing, preparation and food control, and advantages and disadvantages of centralized service. Details of operation and adaptability to particular hospital influence use of pay cafeteria for hospital personnel. Gives list of fundamental records needed for controlling food costs and specific items which can be considered as special charges. Diet therapy serves as educational unit. Diets should be prescribed according to approved hospital diet manual with necessary individual modifications. Dietitian can contribute to community education by teaching value of food dollar in meeting nutritional requirements.

FOOD COST. Groceries and meats show upward trend, dairy products continue on same level, two months advance purchase on potatoes is recommended, and a 5–10% increase in commodity prices is predicted for 1941.

HOSPITAL DIETS. Detailed description of preliminary study made to evaluate adequacy of hospital diets, including nurses', regular ward, high-protein colitis diet, and progressive ulcer diet. Charts show findings on comparative basis of various types of diets. Comparison of calculated values of certain hospital diets and blood levels of carotene, vitamin A and C of nurses and patients suggests possible vitamin deficiency in winter dietaries.

Hotel Management

Vol. 39, February 1941

*50-room success in Alabama. H. L. Hudson.—p. 14.
A symposium of 4 small hotels.—p. 18.
New Admiral Semmes, Mobile, Alabama.—p. 22.
Lord Tarleton Hotel, Miami Beach, Florida.—p. 28.
Presenting the new Wm. R. Barringer hotel.—p. 32.
*19 ways to reduce taxes.—p. 37.
"Management's" merchandising calendar for 1941.—p. 40.
*"Proportions may mean much or little." A. W. Dana.—p. 44.

Libby's BULLETIN BOARD

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No matter what care is used in packing, tomato juice can be no better than the tomatoes from which it's pressed.

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By a special juicing process, the natural color, flavor, and food values of the raw tomatoes are retained in high degree.

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LIBBY'S TOMATO JUICE

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Buffet	—	approx.	1 cup
No. 300	—	"	1¾ cups
No. 2	—	"	2½ cups
No. 2½	—	"	3½ cups
No. 5	—	"	5¾ cups
No. 10	—	"	12 cups

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HOTEL SUCCESS. Illustrations supplement a discussion of policies and methods in effect at the new 50-room Covington Hotel, Opp, Alabama. Financed locally, this modern fire-resistant hotel enjoys a 100% occupancy much of the time. Telephones in all rooms, air-conditioning throughout, inner-spring mattresses, a recreation room, and an enviable location on the shortest paved route to the Florida Gulf coast contribute in making hotel a social and financial success.

REDUCING TAXES. Nineteen informative and helpful suggestions based upon extensive experience with restaurant accounts should aid restaurant managers in effecting tax economies. Because taxes are now a major expense it is imperative that the restaurant executive take every lawful and permissible means to keep them at a minimum.

RECIPE PROPORTIONS. The difference between certain foods served in de luxe restaurants and the same dishes in popular-priced establishments may not be one of quality but of portions and proportions—proportions of expensive ingredients to less costly ones. That costs can almost double by change of proportions of the same quality ingredients is shown in three charts analyzing the proportions and costs of coffee, creamed chicken, and corned beef hash.

Journal of Home Economics

Vol. 33, February 1941

The home economist and the F. H. A. housing program. D. Porter.—p. 73.
Home economics and the study of consumption. C. Van Sycklem.—p. 82.
Laboratory and business relationships in foods and nutrition. C. R. Fellers.—p. 87.
*Feeding in state institutions. J. Sedgwick.—p. 94.
O. E. S. sixth reader. S. L. Smith and G. Adams.—p. 98.
Illinois college students and the home economics curriculum. L. M. Weihing.—p. 102.
Why home economics students leave college.—p. 103.
What can women do today? F. Kerr.—p. 106.
Our wayside inns.—p. 111.

STATE INSTITUTION FOOD CONTROL. Mental patients in state institutions cannot protest, select, or supplement their diet in any way and many are housed from 7 to 35 years in one institution. Only six states (California, Illinois, Indiana, Nebraska, New York and Pennsylvania) have employed dietitians to head up centralized food control in these state institutions. Food must be contracted for the month, and food requirements must be calculated in advance, the quarter or 91 days being the generally accepted time. Quantities of different types of food and their substitutes are determined according to this quarterly ration and food control for the institutions developed on this basis. In California the food administrator maintains general supervision over food control program, makes studies of food to be included in proper ration, correlates the local food production in an institution with the purchased food, establishes sanitary control of food storage, production and service, controls size of portions and amount of waste food, studies equipment and plans improved layouts. Average weight of food (as purchased) per person per day is 4½ lb., of which milk group is 1.0 pt., cereals 0.45 lb., fruits and vegetables 2.0 lb., fats 0.1 lb., sugars 0.18 lb., protein-rich food 0.33 lb. Example is given of the calculation of the milk ration and its purchase adjustment to the available supply of the local dairy and purchase of powdered milk to maintain liquid milk ration. The quarterly per person meat equivalent is calculated as follows: 12 eggs equal 1½ lb. meat; 1 lb. fresh fish, 1 lb. meat; ½ lb. canned fish, 1 lb. fresh meat; 1 lb. carcass pork, 0.69 lb. fresh meat; and 1 lb. live poultry, 0.66 lb. fresh meat. The complicated calculation of the protein-rich food allowance is given in detail.

Modern Hospital

Vol. 56, February 1941

*Practical food purchasing. M. Richards.—p. 90.
*Selecting silverware. C. Sculky.—p. 94.
*Food clinic in the south. S. A. Kurka.—p. 96.
*War declared on pests! M. A. Bailie.—p. 102.

PRACTICAL FOOD PURCHASING. Factors affecting food purchase for hospitals and advantages of buying through the purchasing agent and dietitian. Competitive buying advised with definite rules of selection and records of food cost and departmental expenses kept by the dietitian. Charts show the division of the food dollar to be as follows: poultry, meat and fish, 26.1%; fruits and vegetables, 23.8%; milk, cream and cheese, 21.2 %,butter and other fats, 7.8%; eggs, 6.8%; bread, cereals, and bakery products, 6.3%; sugars, sweets, 3.2%; miscellaneous food and food adjuncts, 4.6%, for the dietary department at Fairmont Hospital, San Leandro, California.

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Also, substantial economies are effected. Fuel waste is prevented. Food losses are reduced. Meat shrinkage is minimized: tests show that as much as 16 additional ¼-lb. servings can be obtained from a 20-lb. rib roast.

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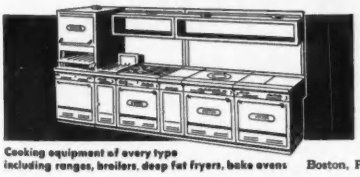

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SILVERWARE SPECIFICATIONS. Commercial silverware should be purchased according to definite specifications. Lists common abuses of silver. Discusses methods and materials used in manufacture of commercial silverware.

SOUTHERN FOOD CLINIC. Discussion of a nutrition clinic under the Red Cross at Burrell Memorial Hospital, Roanoke, Virginia, established to improve dietary conditions among negroes in southwest Virginia.

WAR ON PESTS. Tells how to exterminate ants by destroying the colony.

Personnel Journal

Vol. 19, January 1941

*Defense strikes, hours, labor supply, wages. C. S. Slocombe.—p. 236.
Union-management cooperation.—p. 244.
*Mechanical trades training. Three companies.—p. 252.
*Job sheets for learners.—p. 261.
*Job descriptions.—p. 261.
Economist views personnel practices. H. F. Underhill.—p. 263.
*Wage and hour manual. Bureau of National Affairs.—p. 267.
How to train supervisors. R. O. Backman.—p. 268.
*Student personnel work. E. G. Williamson and T. R. Sarbin.—p. 269.
Dictionary of occupational titles.—p. 270.
Training procedure. F. Cushman.—p. 272.

DEFENSE STRIKES. The avoidance of strikes, labor hours, labor supply, and wage rates are the four major problems which the U. S. will face as the defense program expands. Methods used by other countries now at war may offer some solution to our own national labor problems.

TRADES TRAINING. The 3 training programs which are recommended for mechanical trades are: job training with planned progression within the shop, training in vocational schools, and the training promotion program whereby outstanding employees are able to become highly skilled specialists. All training should be given by full-time instructors who are directly responsible to division managers. Detailed chart of "Steps in Doing Job" illustrates typical shop instructions.

JOB SHEETS. Job sheets have been advantageously used in developing speed in learning and improved skill in job training. By their use young workers learn to follow written instructions and to read blue-prints and specifications. The instructor therefore has more time to devote to those who learn more slowly.

JOB DESCRIPTIONS. Good job descriptions are indispensable for increasing the efficiency of workers, particularly newly hired ones. In addition it helps the foreman to check and rate the duties of a man or a group and to identify weaknesses in their workmanship, and serves as an excellent guide for transfers and promotions.

WAGE AND HOUR MANUAL. The new wage and hour manual published by the Bureau of National Affairs contains much important source material on federal and state regulations of wages and hours. During wartime when labor relations are bound to become intensified, the book will serve as an excellent guide.

STUDENT PERSONNEL WORK. A new book, recommended to all student personnel workers, is Student Personnel Work by E. G. Williamson and T. R. Sarbin. The University of Minnesota has been nationally recognized in the services it has rendered students in their personal problems and in the study the authors contend the student personnel work is a "supplementary type of teaching." The study and teaching should be undertaken with a view toward increasing organizational effectiveness to the maximum.

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Institutions administering Vitamin C with V-C-B eliminate tiresome squeezing of fresh fruit during mealtime rushes, gain valuable storage space often occupied by bulky canned juices and create valuable savings yearly on the food budget.

At only one and 6/10ths cents per 50 mgm of Vitamin C, V-C-B effects a considerable saving over administering Vitamin C in any other form, including canned or fresh fruit juices. And V-C-B's ease of preparation and recognized quality solves, once-and-for-all, the difficult problem of assuring adequate Vitamin C in the daily diet.

Dissolved in water according to directions, V-C-B produces a pleasant fruity beverage containing approximately 1000 International Units of Vitamin C and 50 calories per 4-oz liquid portion—the approximate equivalent of fresh orange juice in caloric value and Vitamin C potency.

V-C-B may also be used to increase the Vitamin C content of all fruit juices, and mixed with milk, ginger ale, or charged water as a refreshing beverage in Liquid Diets, Restricted Diets, High Carbohydrate Diets and Forcing Fluids.

Because of the economy and the time and space saving features of V-C-B, the Byrd Expedition took no other source of Vitamin C to Antarctica. For the same reasons many State Institutions have adopted V-C-B as a standard for administering Vitamin C.

Many of these institutions are saving hundreds of dollars yearly with V-C-B. Similar savings can be brought about in your institution through use of V-C-B. Send for additional details and a 3½-oz sample can of V-C-B (makes one quart of Vitamin C Beverage) free of charge, NOW!

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NEWS NOTES

Executive Board, American Dietetic Association. The midyear meeting was held at the Drake Hotel, Chicago, February 22–23, all members with the exception of Mrs. Katharine Ansley, chairman of the Administration Section, being present, and in addition the business manager, the educational director, the JOURNAL editor, and the chairman of press relations.

The President of the Association, Mary I. Barber, as chairman of the Board, presented as a gift from Mrs. Beula B. Marble to the Association, the Association Seal embroidered by Mrs. Marble on linen and framed for hanging. The seal will be used on all official publications and stationery of the Association.

The usual reports of the several elective and appointive officers and committee chairmen were presented to the Board for action.

Miss Barber commented on the current interest in nutrition as evidenced by newspaper reports, the increasing interest of allied groups and the number of American Dietetic Association members now in key positions in Washington, D. C.

The treasurer of the Association, as chairman of the Finance Committee, presented the tentative budget as drawn up by the Finance Committee. In this connection it was mentioned that Canadian members whose dues are not paid up will be allowed to resign in good standing and may be reinstated as members whenever this is desired.

Nell Clausen, vice-president and chairman of the House of Delegates, presented the results of an extensive survey of the membership as determined through the various affiliated state associations with regard to two matters: methods of increasing Association income, and organization of defense programs in the several states.

With regard to the first matter, a summary of the replies of 24 states indicated that 8 states favored an increase in dues, 11 a change in JOURNAL format with a view toward increasing income from advertising, while 5 states suggested other means of increasing income. Of the 8 voting members of the Board present, 5 voted in favor of a change in JOURNAL format and 3 opposed, the change to become effective January 1942 with the JOURNAL on a 12-issue per year basis.

The defense program appeared to be well under way in all the affiliated states with very few exceptions, tangible results to date being indicated by defense programs of direct aid to Britain, speakers' bureaus, special articles in the lay press, and classes in nutrition.

Other matters covered in Miss Clausen's report concerned organization of the activities for the House of Delegates. The Board approved a 2-year term of office for each delegate among other action.

The secretary, Mary Northrop, announced that 567 new members had been accepted and that the membership had reached 4763 as of February 22.

The Board voted to support the Sheppard Bill S.839 and that the Surgeon General be notified that the Association supported the measure.

Mrs. Marie Harrington of St. Louis and Gladys Hall as coordinator of program activities presented plans for the twenty-fourth annual meeting in St. Louis, October 20–23.

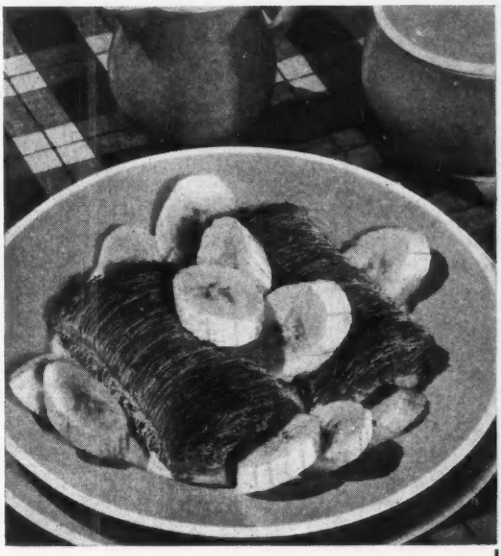
After a full discussion of the preliminary report of the Revisions Committee, the Board adjourned at 6 p.m. February 23.

Catholic Hospital Association. Under the patronage and by the invitation of His Eminence, Dennis Cardinal Dougherty, Archbishop of Philadelphia, the officers and executive board of the association announce that the twenty-sixth annual convention will be held at Convention Hall, Philadelphia, June 16–20.

Conference of Food Service Directors. Winning S. Pendergast, supervisor of school lunchrooms, Detroit, and general chairman of the 1941 Conference, announces that it will be held November 6–8 at the Hotel Commodore, New York.

A Continuation Course in Dietetics was conducted by the University of Minnesota Center for Continuation Study February 20–22. This work was done by the University under the Commonwealth Fund and the entrants were limited to members of the American Dietetic Association and those whose training and experience would qualify them for membership. Program

VITAMIN B_1 as Nature provides it!



IN 2 National Biscuit Shredded Wheat plus a cupful of milk there is more than 1/3 to nearly 1/2 the daily average requirement of Vitamin B_1, as Nature provides it.

This combination also includes a part of the daily requirement of at least seven other important nutrients. When any of several fruits are added, this one-dish meal (breakfast, lunch or supper) affords additional food values.

These crisp, tender biscuits are considered to be one of the most palatable forms of whole wheat. They are made of 100 per cent whole wheat, including the nutritious wheat germ, steam cooked, pressed into slender strands (for readier assimilation in the system), then oven-baked. *Nothing is added to the pure whole wheat.*

Ready to serve, the biscuits can be easily heated, if desired, either in the oven or by dipping quickly into hot water and draining. Then serve, in usual way with milk or cream. Pleasant to the taste, National Biscuit Shredded Wheat appears frequently on menus in homes and institutions throughout the country. Its appetizing flavor makes it especially suitable for encouraging increased intake of milk in the diet.

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NUTRITIONAL VALUES

Analyses show the following nutrients *naturally* present in 2 National Biscuit Shredded Wheat with a cupful of milk:

VITAMIN B_1	More than 1/3 the daily average requirement
CALCIUM	More than 1/3 the daily average requirement
PHOSPHORUS	More than 1/2 the daily average requirement
IRON	More than 1/5 the daily average requirement

There is also a generous part of the daily energy requirement (CARBOHYDRATES and PROTEINS) and other nutritional necessities including VITAMIN A and VITAMIN G.

Reprints of this page will be sent free of charge, on request. Address National Biscuit Company, Dept. J-4, Station O, New York, N. Y.

hours were from 8:30 until 6:00 each day, with tea served at 4:00. Regular meal service was provided in the dining room of the Center and on February 20 dinner was served in the Coffman Memorial Union, followed by a tour of the new kitchens. The program, in which the directors of all departments in the University were invited to participate, covered the following topics: Orientation; Physical Examination of Employees; Training Course for Helpers; Discussion of Rules and Regulations for Staff; Advances in Vitamin Research; Dietary Indications in Allergy, Chemotherapy, Obesity, Pregnancy and Lactation; Discussion of Menu Planning and Quantity Cookery; Diabetes Mellitus; Diet in Liver, Gallbladder and Gastrointestinal Disorders; Demonstration of Purchasing Standards for Frozen Vegetables, Meat, Eggs, Milk, Cream, Butter, Cheese and Ice Cream; Postoperative Feeding; Evaluation of Nutritional Status of Children, High School Girls and College Women, and Mature Adults; Discussion of National Defense Projects and Community Education; and Discussion of Budgeting and Cost Accounting in Food Service.

The course was sponsored by Dr. William A. O'Brien, director of Post Graduate Medical Education, and Mr. Julius M. Nolte, director of the Center for Continuation Study. The attendance was unexpectedly large, exceeding that of the previous two years.

Refresher Course for Dietitians at Teachers College. This course will be given cooperatively by Lenna Cooper, Montefiore Hospital; Nelda Ross, Presbyterian Hospital; and Loretta Scanlan, U. S. Marine Hospital, from July 2 through August 15, offering observation and experience in the management of hospital food service. At Montefiore Hospital experience will be offered in menu planning, food ordering, food preparation, food cost accounting, personnel management and diet therapy as applied to a variety of chronic conditions. At the Presbyterian Hospital emphasis will be placed upon food service to patients, the food clinic, educational program for student nurses, student dietitians and medical students, and conferences and observation on the administration of the formula room. The U. S. Marine Hospital offers opportunity for the study of administration of food services in a government hospital including a cafeteria for ambulatory patients, purchasing and stores control, and food service equipment.

Students may register for this course and for Institution Management s151 which covers classes, conferences and clinics in each hospital. Institution Management s207G carries 4 points of credit; Institution Management s151, 2 points. These credits may be applied toward a master's degree. Fees including registration amount to $82. Meals may be purchased at the hospitals, and rooms are available at reasonable rates in the vicinity. Long-sleeved uniforms, white walking shoes with rubber heels, and white hosiery should be provided. For further information write to Dr. Mary de Garmo Bryan, Teachers College, Columbia University.

Report of the Consumers' Counsel, 1940, United States Department of Agriculture. This report submitted to Mr. Milo Perkins, director of marketing, contains information on prices, consumers' counsel activities; informational services of the division; and other details concerning its work. One activity of the division is the publishing of the *Consumers' Guide*, distributed free to a list of 150,000 persons, chiefly nutritionists, buyers for public institutions and hospitals, staffs of federal, state and local governments and those having some specific interest in consumer welfare.

Another folder just distributed by the division concerns other publications available, including market service, consumer notes on buying information, consumers' bookshelf (an annotated bibliography, price 15 cents) and "consumers look at eggs" (giving information on nutritional value and quality grades, price 10 cents). The division also has a series of posters, photographs and a collection of printed material available for exhibit purposes, and presents consumer information on the radio over a national network. All inquiries concerning the division should be addressed to Mr. D. E. Montgomery, consumers' counsel, U. S. Department of Agriculture, Washington, D. C.

Advertisers Ask Consumers. The foregoing was the theme of the Second Annual Consumer Forum conducted by the Advertising Women of New York, Inc. on February 18 at the Hotel Pennsylvania. The morning program, with Barbara Daly Anderson presiding, included a broadcast through the "Consumers Club of the

Embo a Natural Dietary Supplement for Vitamin B Complex therapy

Delightfully palatable flavor . . . rich in natural Vitamin B_1 and containing other components of the Vitamin B Complex . . . two excellent reasons for Embo's growing popularity.

Patients find Embo "easy to take" because of its appealing flavor. Doctors find their prescription is followed regularly.

Embo is purified entire wheat embryo, lightly toasted to improve flavor and enhance keeping quality. Effective in cereals, salads, prepared foods, or direct from the can.

Fresh wheat germ is one of the richest natural sources of Vitamin B_1 and contains other valuable components of the Vitamin B Complex. Thus you'll find Embo (as others have) a valuable dietary supplement in many cases of multiple nutritional deficiency.

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Vacuum-packed to guarantee freshness, full nutrient value.

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Please send free Professional Sample of Embo.

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Specializing in_____
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The Jim Vaughan

ELECTRIC MEAT, FISH AND BONE CUTTER

The "Jim Vaughan" is gaining popularity among leading dietitians. There are many reasons why this modern piece of equipment is rapidly taking its place in the hospital kitchen.

The Saving of Meats. The uniform and controlled cutting of meats, fish, and other meat products on "Jim Vaughan" result in equal and more portions. Users claim savings of 5 to 20% on their meat bills.

"Jim Vaughan" is Always Ready for work. It doesn't require highly skilled or experienced help. Portions are ready when wanted.

"Jim Vaughan" Cuts Many Foods, beef, veal, lamb, pork, fish, bones, or poultry. Besides such meats, "Jim Vaughan" also is extensively used on many other products to cut them into uniform portions.

The Saving of time. "Jim Vaughan" saves 50 to 80% of the time required for cutting. Such saving of time quickly pays for a "Jim Vaughan."

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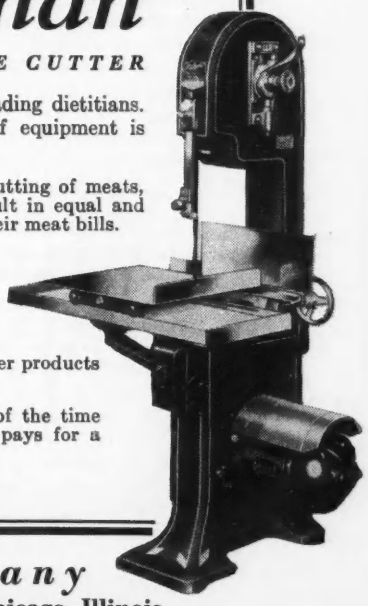

"Jim Vaughan" Company
732-738 N. Franklin Street, Chicago, Illinois

Air", and an open forum with Harry F. Anderson, director of the Department of Public Relations, General Mills, Inc., Minneapolis, as moderator. The questions were posed by delegates from the New York Conference of Clergymen and Laymen, Greater New York Federation of Churches, and the Women's Trade Union League, and were answered by Mr. Roger William Riis of Roger William Riis Associates, Mr. C. B. Larrabee of *Printer's Ink*, and others.

During the afternoon open forum, the queries came from educational groups including Teachers College, Columbia University, New York University, Hunter College, New York City Schools, College of the City of New York; from women's groups of Greater New York, New Jersey, Eastern Pennsylvania, New York State, Connecticut, Long Island and Westchester County; and from the young men's group of the Advertising Club of New York in cooperation with student groups. The questions were answered by Dr. Daniel Starch of Daniel Starch Associates, Mrs. Jean Wade Rindlaub of Batten, Barton, Durstine and Osborn, and others.

Elsie Stark, president of the Advertising Women of New York, presided at the luncheon program which included "The Consumer Looks at Advertising" by Helen Slator, secretary, Advisory Committee on Wholesale Distribution to the Committee on National Defense, and a discussion by Mr. Harold W. Brightman, chairman of National Consumer-Relation Council. Speakers at the dinner meeting included Lisa Sergio, commentator on station WQXR, whose subject was "Citizenship and the Consumer", and Mr. Russell Davenport, editor, *Fortune* magazine.

Navy Gets a Scientific Cook Book. New York papers on February 24 carried an account under the above head to the effect that the navy cook book is being completely revised "for the first time in ages". In an interview with Dr. Mary de Garmo Bryan, chairman of the Cook Book Revision Committee, Dr. Bryan stated that the cook book will include some information on diet, protective foods and menu planning, as well as recipes. "We're trying to capitalize on all the experience available," Dr. Bryan said. "The people on this committee have experimented in nutrition and quantity menus for years. At the same time we have to keep in mind the limited space in the galley of a ship. That means the menus must be kept simple." The newspaper account stated that there would be recipes for beans, for "it wouldn't be the navy without the navy bean." But the committee will emphasize new and interesting recipes for their use. The navy allows each man an extremely liberal ration. It amounts to more than a pound of meat, a pound of fruit and almost three pounds of vegetables a day. Added to this are equally generous portions of eggs, bread, sugar and so on.

Programs on National Defense for Organizations. Sally Woodward, in charge of relations with the public for General Mills, Inc., Minneapolis, has directed the preparation of a "kit" containing several pamphlets encased in a folder, and arranged in the following order: How To Plan Your Programs; A Program on Homemaking; A Program on Nutrition; A Program on Health; A Program on Buying; A Program on Recreation; A Program on Community Education. Copies of the material are available on application to General Mills, Inc., Department of Relations with the Public, Minneapolis, Minnesota.

Retail Trade in the United States in 1939, Employment Payroll and Inventory. Under date of February 14, 1941, the Bureau of the Census, United States Department of Commerce, Washington, D. C., distributed information based on the sixteenth census of the United States concerning the number of employees in relation to the eleven major business groups. Food stores ranked first in terms of sales, obtaining 24.2 per cent of the dollars spent in retail stores in 1939. Eating and drinking places had the second largest number of full and part-time employees. The tabulations indicate the growth in the number of food stores and sales since the previous census.

Summer School Courses at Colorado State College. The program for the 1941 Summer School at the Colorado State College of Education offers an excellent selection of courses. In addition to those offered in Nursing Education, students coming for the six or eight-weeks session, June 16–August 8, have a wide selection of courses in education, which includes mental hygiene, psychology and philosophy; the social

Pleases Patients and Staff . . . and your budget, too!

Think of cost in terms of satisfaction . . . satisfaction to your patients and staff . . . and you quickly understand why we say that Continental Coffee is the least costly coffee you can serve!

For Continental Coffee pleases . . . pleases critical tastes with its appealing goodness . . . pleases strict budgets with its gratifying cup-yield and unequaled economy.

Try this fine coffee . . . today! A trial package is yours for the asking.

WE DESIGN AND BUILD the finest coffee equipment to brew the best coffee at lowest cost per cup. Write for details.

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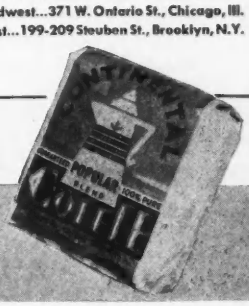

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AMERICA'S LEADING HOSPITAL COFFEE

studies, including history, political science, sociology, and economics; nutrition; literature and language; and the sciences. Twelve quarter hours is the maximum load. There will be two four-week programs, June 16–July 11 and July 14–August 8.

Colorado Dietetic Association. The fall meeting was held at the Brown Palace Hotel in Denver. Meetings were held with the Colorado Hospital Association during the morning, and a luncheon-business meeting of the dietitians at noon.

Members of the Denver association of dietitians were guests on December 9 of Esther Ratliffe and Elizabeth Hughes, dietitians at St. Luke's Hospital, at their annual Christmas party. Mrs. Pauline Swanson and Mabelle V. Williams entertained shortly before Christmas at the annual Christmas party for the student dietitians.

On January 13 Mary Reutz, Emma Hollett, and Katharine Boyd, staff dietitians of Children's Hospital, were hostesses at a beautifully appointed dinner at the hospital nurses home. Twenty Denver dietitians were guests. A business meeting followed dinner, at which plans were discussed for participating in American Dietetic Association projects and defense programs.

The 1940–41 dietetic training class at Colorado General Hospital, with St. Luke's and Children's Hospitals cooperating, includes these students: Virginia Conners, University of North Dakota; Elizabeth Dickinson, Ohio University; Barbara Kline, University of Colorado; Evelyn Larson, North Dakota Agricultural College; Rowena Minton, Montana State University; and Ona Pellman, Marymount College.

All six graduates of the 1939–40 dietetic training class have positions as follows: Margaret Culp, Community Hospital, Boulder, Colorado; Helena Booher Drake, Camden Clark, Parkersburg, West Virginia; Aline Haakinson, Buffalo General, Buffalo, New York; Iladelle Holtslander, St. Anthony's, Denver, Coiorado; Esther Mahoney, St. Catherine's, McCook, Nebraska; Buena Pugh, Murray Clinic, Butte, Montana.

Jeanette Albert, 1939 graduate of the Colorado dietetic training course, has gone to Japan for a three-year service as dietitian in an Episcopal missionary hospital.

Addene Saxton, Seattle, is now assistant dietitian at Presbyterian Hospital, Denver, replacing Charlotte Nielson who has accepted a position in Seattle. Ruth Schmidt, formerly at Greeley Hospital, is now at Fitzsimmons Army Hospital, Denver. Mrs. Virginia Gorrell has succeeded Georgia Stevens as assistant at St. Joseph's, Denver. Elizabeth Lefferdink is now assistant at Denver General Hospital.

Colorado General Hospital has opened its new hospital wing, completed some months ago. This brings the total bed capacity of the general hospital to 200. In the new wing are men's medical ward, women's surgery, nurses' infirmary, x-ray, physiotherapy and fever therapy.

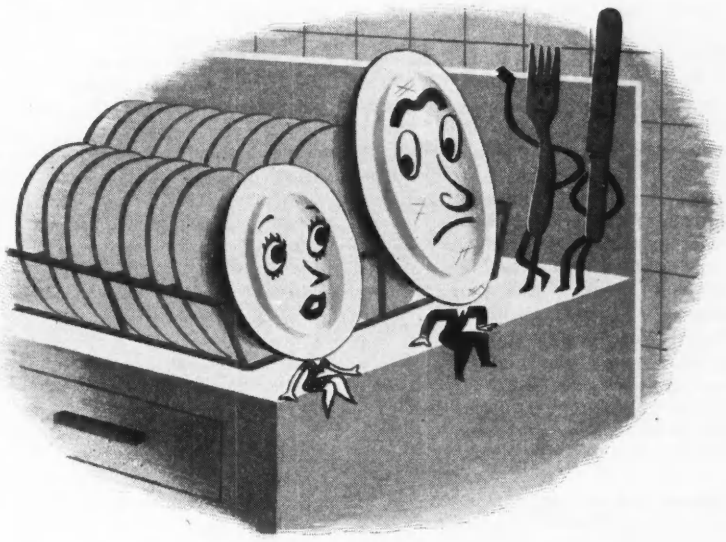
The Denver dietetic group held a benefit bridge party at the Y.W.C.A. on February 24.

Detroit Dietetic Association. According to news releases in the Detroit papers, the association is considering giving a refresher course in dietetics so that dietitians at present inactive may be encouraged to fill the many positions now open. Dr. Lillian Meyers of Wayne University and Winning Pendergast of the Board of Education, Detroit, are in charge of this project.

Another matter under consideration by the association, according to Mary M. Harrington of Harper Hospital, relates to methods of assisting physicians in correcting dietary deficiencies in men rejected for Army service. Plans are also being made to supply speakers on nutritional subjects. Members of the association active in the defense program, including those mentioned, are Mrs. Gladys Vanderbelt, Detroit Department of Health; Dorothy Hacker, Visiting Nurse Association; Helen Shaw, North End Clinic; Ragna Anderson, Department of Public Welfare; Marcia Ward, Visiting Housekeeper Association; and Mrs. Catherine Leamon, Wayne County Department of Social Welfare.

Illinois Dietetic Association met March 7–8 at the new Illini building on the university campus with the local Champaign-Urbana group as hostesses. The two-day program with Wintress Dalbey, Mildred Bonnell, Rita Black, and Mildred Chapin as presiding officers, included tours of Illini Union Building and the Home Economics Department, a business meeting, a dinner, a tea and a luncheon, and the following program: "The Educational Director and the

Said Mrs. Dish to Mr. Platter . . .



"How are you feeling today?" said Mrs. Dish to Mr. Platter.

"Frankly, I'm feeling a bit spotty," Mr. Platter said.

"A *bit* spotty!" said Mrs. Dish. "Why, you're spotty all over! Just look at your color!"

"That's what I meant to say," said Mr. Platter. "It's that washing compound. It certainly makes me look bad!"

"I feel awfully dull, lately," said Mr. Fork, sticking himself into the conversation. "Do you s'pose that's my trouble too?"

"Nothing else but," said Mr. Platter. "Somebody ought to tell these people about Wyandotte Cleaners and Wyandotte Service."

"What we *really* need is Wyandotte Keego," Mr. Knife cut in, "this water here is as hard as nails."

"Let's speak to the management," Mr. Platter said, "maybe they'll call in a Wyandotte man and get us back in shape again."

"How *can* we speak to the management?" Mrs. Dish wanted to know.

"That's what we're doing now, Stupid," Mr. Knife said sharply. "Don't you realize that?"

Wyandotte
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SERVICE REPRESENTATIVES IN 88 CITIES
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American Dietetic Association", Gladys E. Hall; "Exhibit Material for Nutrition Clinics", Annette Young, consultant nutritionist, American Red Cross; "New Facts About Meat", Professor Sleeter Bull, University of Illinois; "Colonial Architecture — Our Heritage — Its Meaning Today", Dean Rexford Newcomb, College of Fine and Applied Arts; "Some Facts Affecting the Mineral Content of Fruits and Vegetables", Dr. T. S. Hamilton, associate professor of animal nutrition, University of Illinois; "The Determination of Nutritional Status", Dr. Julia P. Outhouse, professor of nutrition, Department of Home Economics; "Vitamins—March 1941", Dr. Wilhelmina Armstrong, Department of Home Economics; "Selling Your Message", Alta Gwinn Saunders, professor of business English, University of Illinois; "Understanding Yourself", Dr. Nellie L. Perkins, associate professor of home economics, University of Illinois; "Your Community and You", Professor Lita Bane, head of the Department of Home Economics, University of Illinois.

Massachusetts Dietetic Association. The February meeting was held at the Joseph A. Pratt Diagnostic Hospital, Boston. Dr. J. H. Pratt, physician-in-chief, gave an illustrated lecture on his reminiscences of Osler and McKenzie.

Two round-table discussions were held in January: one on administration, led by Gertrude McDonald; the other on professional education, led by Ruth Walker Crosley.

Georgiana Pearson, who has been in charge of the diet kitchen of the White Building, Massachusetts General Hospital, has left to take charge of the diet kitchen of the Gorgas Hospital, Ancon, Panama Canal Zone.

The Massachusetts Department of Public Health, Division of Child Hygiene, announces that the New England Health Institute will be held at the Hotel Statler, Boston, April 2–4, 1941. One section will be devoted to nutrition and one on April 2 to school health.

Minnesota Dietetic Association. "The Professional Dietitian in the Army" was the subject discussed by Col. Kent Nelson, formerly corps area surgeon of the Seventh Corps Area, at the January meeting. Alice Beister, head of the Foods and Nutrition Department of the University of Minnesota, spoke on "Nutrition in National Defense." The program was in charge of the Professional Education Section of which Lydia Nelson, Swedish Hospital, is chairman.

Gertrude I. Thomas, chairman of the Diet Therapy Section, conducted the February meeting. The value of wheat germ in nutrition, and the enrichment of white flour by wheat germ and minerals was discussed by Dr. Clyde R. Bailey, professor of biochemistry at the University. Dr. Spink told of the work on ascorbic acid and infection which has been conducted at the University Hospital, and Ethel Clemens, Swedish Hospital, led a panel discussion on vitamin deficiencies in which the following participated: Mary Foley, Mayo Clinic, Rochester, "Fever Diets"; Katherine Wismer, University Farm, "Diabetic Diets"; June Ary, University Hospital, "Epilepsy Diets"; Evelyn Ingalls, Gillette Hospital, St. Paul, "Reduction Diets"; Elizabeth Ryan, University Students Health Service, "Gastric Ulcer Diets"; Lois Murray, Maternity Hospital, Minneapolis, "Pregnancy and Lactation."

Jeanette Wolden, who has recently completed a year's internship at Ancker Hospital, has accepted a position at St. John's Hospital, St. Paul. Lucille Clark, also of Ancker, returned as a member of the staff the last of February.

The Veterans Hospital, Minneapolis, has appointed two staff dietitians, Mrs. Helen R. Cabiel and Mrs. Mary E. Peterson.

Joan Durnan Tierney, formerly of Children's Hospital, has resigned and Miss Severson is taking her place.

Marjorie Rowles is now assistant dietitian at Midway Hospital, St. Paul.

Olga Andersland, University of Minnesota, Ann E. Wuorenman, State Teachers College, Framingham, Massachusetts, and Charline Stuebe, Iowa State College, Ames, have recently joined the University Hospitals as nutrition interns.

Gertrude I. Thomas, University of Minnesota Hospitals, and Winnifred Erickson, Ancker Hospital, spoke before the American College of Surgeons in Minneapolis March 10–12.

As the result of a committee meeting to formulate a series of radio programs, a large group of dietitians is being formed for emergency defense activities. This group is composed of dietitians who have been professionally active in former years, but who are now married.

Dessert Suggestions
FOR TIRED APPETITES
PLANNED FOR VARIETY... DESIGNED FOR ECONOMY

← **JELL-O PUDDINGS.** Ailing appetites respond quickly at the sight of these nourishing Jell-O Puddings. So delicious—they take top score in taste tests! Yet so easy to prepare that anyone can make puddings in 5 to 7 minutes.

3 Delicious Flavors

Real, rich Chocolate and Butterscotch. Also Imitation Vanilla (synthetic, for more lasting flavor). For variety serve all three! Their cost is low . . . average about 2¢ per portion. For pies, use these and Jell-O Lemon Pie Filling.

JELL-O is easy to digest and patients appreciate that extra-rich flavor that only Jell-O gives. Six delicious flavors offer plenty of variety.

Jell-O is easy to prepare. → For tempting variations, mold in sliced canned, fresh or frozen fruits. Remember, there is only one Jell-O.

PURE INGREDIENTS

Only the finest ingredients are used in making Jell-O and Jell-O Puddings. We guarantee these products will meet the highest food standards. Both are sold by your jobber. He'll be glad to supply you.

NOTE: FREE RECIPES

If you are not already receiving GF recipes specially designed for hospital service—address General Foods, Institution Dept., Battle Creek, Michigan.

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JELL-O & JELL-O PUDDINGS
PRODUCTS OF GENERAL FOODS

New Jersey Dietetic Association. On February 6 the association attended a benefit performance of "The Corn is Green", starring Ethel Barrymore, the proceeds of which are to be applied to the fund being raised for the Red Cross.

The dietitians of the Hackensack Hospital were hostesses at a shower for Elizabeth Rupert, head dietitian, who is leaving the hospital in April to be married.

Lillian Park, Essex County Hospital, Cedar Grove, entertained at a supper on February 28, the proceeds of which will go to the Red Cross Fund.

New York State Dietetic Association. The defense program in New York State was reported in February as well under way with registration of all dietitians within the state. The newspapers have been generous with their publicity, facilitating the registration of inactive dietitians willing to serve in an emergency.

A meeting of the Defense Committe was held in Albany February 15. Delegates from each local association attended and the local programs were coordinated. The following activities were reported: radio broadcasts (Rochester); newspaper publicity throughout the state; teaching nutrition program, including lecture outlines, speakers' bureau, and bibliography of available free literature to be used in nutrition classes; gifts to British War Relief (mobile kitchen, New York City, hospital supplies, Rochester); sewing and knitting classes, carried on largely by married non-active members; raising money for nutrition teaching program, New York City; refresher course, Rochester; cooperation with Red Cross in teaching nutrition, canteen or food preparation courses, and in communal feeding in New York City and Albany; cooperation with Land-Grant College Nutrition Project (Rochester) in relation to speakers' bureau and exhibits; cooperation with American Women's Voluntary Service in teaching, New York City; cooperation with Young Women's Christian Association (Syracuse) in nutrition classes and exhibits.

The Greater New York Association reports that the dietitians' military status bill has recently gained the support of the Group Action Council, which has its headquarters in New York City. Lenna F. Cooper, Montefiore Hospital, reports that the Council passed a resolution to support passage of the bill, S.839.

On February 10 Laura Comstock and Marie Dutch entertained the Rochester Dietetic Association. Helen Williams, head of the Order Department of Eastman Kodak Company, gave a most interesting talk and showed colored movies of Guatemala. A voluntary contribution by each member was voted for the British War Relief. This money will be used to buy needed equipment.

Dr. Anna Bourquin of the Home Economics Department of Syracuse University, spoke at the February meeting of the Central New York Dietetic Association on "Physiological Functions of the Vitamins." The meeting was held at Syracuse Memorial Hospital.

The Buffalo Dietetic Association joined with other associations in the Erie County Inter-Club Council mass meeting on February 15, the birthday of Susan B. Anthony. Mrs. Ruth Bryan Rohde spoke on "This Democracy of Ours".

Eileen Yule, formerly assistant dietitian at Roosevelt Hospital, has been appointed assistant dietitian at the New York Hospital, Westchester Division.

Lillian Emoff has returned from a winter vacation at Miami Beach. Miss Emoff was formerly assistant dietitian at Montefiore Hospital and is active in the Greater New York Dietetic Association.

Ruth Silverman, Syracuse, New York, was a local delegate to the Defense Committee meeting in Albany, February 15.

Mrs. Margaret Cairns, who recently joined the Rochester Dietetic Association, is leaving the city to make her home in Wilmington, Delaware, where her husband has a new position with the Dupont Company.

Blanche Bohach and Elizabeth Henry were representatives from the Rochester Dietetic Association to the State Defense Committee meeting in Albany.

Eleanor Glosick, Jeanne Rumont, Helen Strobel, Frances Wiegand and Genevieve Buske are now members of the Rochester Dietetic Association.

Evelyn C. Avery of Elmira College has agreed to take over the work of the Defense Committee in that part of the state.

Pennsylvania Dietetic Association. Florence Peters, state president, writing in the February *Bulletin*, mentions that the state association is a member of the Pennsylvania Legislative Council,

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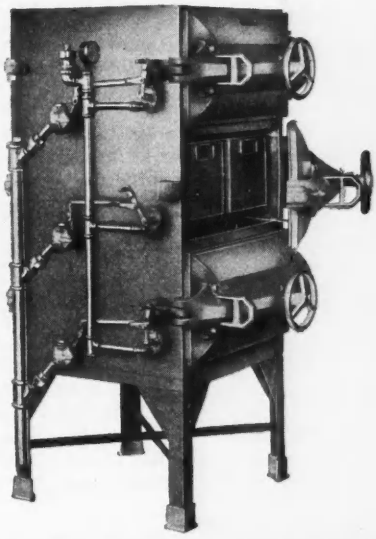

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composed of fourteen organizations, including the American Association of University Women and others representing over 500,000 citizens. The object of the council is to inform, interest and gain active support of its members in securing the enactment into state law of the measures which this Council endorses.

Announcement was also made that the Pennsylvania Nutrition Council met on January 24 with Dr. Paul Dodds, director of Maternal and Child Health, State Department of Health, speaking on "Nutrition Needs in the State of Pennsylvania." The Council has named three committees and the chairman of each: Utilization of Food Resources, Phyllis K. Sprague; Protection and Promotion of the Nutrition of Children and Families in Pennsylvania, Mrs. Anna dePianter Bowes; and Leadership in Community Nutrition Programs, Margaret Brown.

Rochester Dietetic Association sponsored a refresher course March 21–22 at the Hotel Rochester. On Friday morning, visits to the following places were scheduled:

The Benjamin Franklin, East and West, and John Marshall High Schools where surplus food plate lunches and methods of shipping food from one high school to another were discussed. At the Board of Education Building a centralized school-room set-up was shown, also personnel forms, financial controls, lunchroom forms and purchasing methods. The Eastman School of Music Dormitory displayed new equipment. The Rochester General Hospital showed a perpetual inventory of the main store-room, personnel records and forms, also infant formulae, food preparation, cost accounting and therapeutic trays. The cost accounting system was a feature at the Genesee Hospital, also the various clinics in the outpatient department, the equipment and food preparation.

Dr. John R. Williams gave a short illustrated lecture on diabetes and diabetic diets at the Highland Hospital. At this hospital the cost accounting system with visible index in the main store-room was on display and in the new Hall building, which is entirely a maternity wing, central tray service could be observed.

Other tours included the large kitchens and observation of the food service to the patients at the Strong Memorial Hospital, the Monroe County Hospital kitchens completely equipped with monel metal, the Iola Sanatorium kitchens, and, by special request, St. Mary's Hospital, Eastman Kodak Office Cafeteria, and Sibley Lindsay and Curr Company Tower Tearoom.

Exhibits included: Cakes, Dorothy Andrews, John Marshall High School; Gadgets, Alice Easton, Sibley, Lindsay and Curr Company; Garnishes, Mary Foote McCargo, General Railway Signal Company and Helen Williams, Edison Technical and Industrial High School; and Better Nutrition for Defense, Gwendolyn Craver, Genesee Hospital.

Other features of the program included a demonstration of salads, by Alice Burgoin, Cornell University, and round-table discussions with leaders as follows: "Infant Feeding", Dr. Donald Posson, Rochester; "New Phases in Diet Therapy", Blanche Bohach, Rochester General Hospital; "Menu Planning", Etta Handy, Eastman School of Music Dormitory; "Surplus Foods", Mr. George Moore, Albany; "Plate Lunches (10 and 12-cent meals)", Florence Quast, Syracuse University; "Making School Lunches Vital", Olive Fay, East High School; and addresses by the following: Dr. Lyman C. Boynton, Rochester, "Nutrition and National Defense"; Mr. George West, Health Bureau, Rochester, "Sanitation"; Dorothy Roberts, Cornell University, "Equipment"; and Dr. Frieda S. Robbins, subject to be announced.

St. Louis Dietetic Association. Officers for 1940–41 are as follows: president, Ruth Kahn, Washington University Clinic; vice-president, Helen Latta, Jewish Hospital; secretary, Gertrude Samson, City Hospital No. 1; treasurer, Eugenia Shrader, 6650 Waterman Avenue.

The October meeting was held at the Jewish Hospital Nurses Home. Theodora Stebbins, Grace Zerbolio, and Ruth Kahn discussed the aims and purposes of the St. Louis Dietetic Association, Missouri Dietetic Association and American Dietetic Association. Thelma Lisón, Margaret Sticklen, Vera Cernick Lewis and Helen McLachlan discussed interesting facts concerning their professions.

The November meeting was held at Kaldor Hungarian Restaurant. Following a typical Hungarian dinner, several members of the organization reported on the national convention which they attended in New York.

Elizabeth McCorkle, chairman of the Community Education Section, had charge of the

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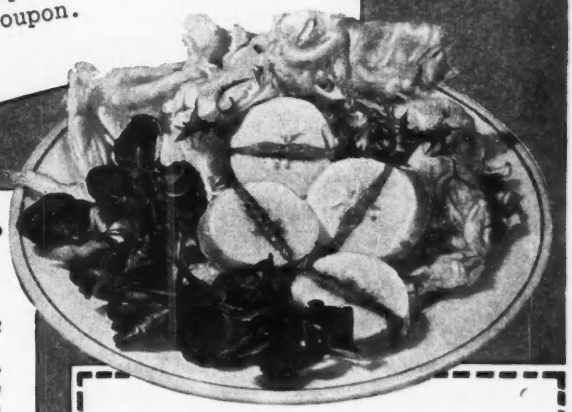

BANANA PEANUT BUTTER SALAD
(1 large or 2 medium servings)

1 ripe banana*
2 tablespoons peanut butter
Lettuce Salad greens

**Use fully ripe banana . . . yellow peel flecked with brown*

Peel and cut banana lengthwise into halves. Spread cut surface of one half with peanut butter. Top with corresponding half, pressing together firmly. Cut into ½-inch slices. Arrange on crisp lettuce. Garnish with crisp greens, if desired. Serve with mayonnaise or cream dressing.

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program at the December meeting. Mildred Sanderson, superintendent of Municipal Visiting Nurses; Thelma Harris, home economics consultant of the Social Planning Council; Adene Latta, district supervisor of housekeeping aid; and Wilma Mittelberg, manager of University City School Cafeterias, conducted a round-table discussion on "The Resources in St. Louis for Community Education."

At the January meeting, Sabrine Kennedy of Southern Equipment Company gave an interesting and informative talk on "Administration from the Equipment Angle." Theodora Stebbins, chairman of the Administration Section, was in charge of the program.

Dr. Robert Elman of Washington University Medical Clinic spoke at the February meeting on "The Importance of Protein Deficiencies in Surgical Patients."

Plans for the 1941 national convention to be held in St. Louis October 20–23, were discussed at the meeting on March 3, 1941. The officers of the association were dinner guests of the dietitians at Barnes Hospital.

Tennessee Dietetic Association. The annual meeting was held February 7–8 at the Hotel Peabody, Memphis. Following registration, an exhibitors' tea and a musical program opened the meeting. The evening session with Fairfax T. Proudfit presiding included the following: "Observations of Nutrition and Health Conditions in Europe", Dr. Ralph J. Mitchell, U. S. Public Health Service, U.S. Marine Hospital, Memphis; and "Importance of Nutrition in National Defense", Colonel Paul W. Gibson, Medical Corps, Second United States Army.

On Saturday morning the Administration Section, with Lydia Gauvin presiding, presented Dr. Margaret Johnson, George Peabody College, Nashville, who discussed "Recent Research in Soy Beans", and Gladys Hopper, Tennessee state nutritionist, speaking on "Nutrition Work in Tennessee." Following a welcoming luncheon and an address by Dr. O. H. Hyman, dean of College of Medicine, University of Tennessee, the afternoon session, sponsored by the Diet Therapy Section, presented "Foundation Diets or Fewer and Better Diets", by Dr. Paul C. Esweiler, University of Arkansas College of Medicine; and "Review of Present Conceptions of Nutrition Needs", by Sybil Smith, U.S. Department of Agriculture, Washington, D.C. Mary P. Wilson, Home Economics Department, George Peabody College, presided at the annual banquet which closed the meeting and at which Judge Camille Kelly of the Juvenile Court, Memphis, was the speaker.

Twenty-one exhibits engaged space at the meeting and the attendance was very satisfactory. New officers are as follows: president, Jane Smith, Willis C. Campbell Clinic, Memphis; president-elect, Elizabeth Terrell, City Schools, Chattanooga; vice-president, Hazel Bolton, Children's Hospital, Chattanooga; and secretary-treasurer, Millie Cross, Baptist Hospital, Memphis.

The Memphis Dietetic Association has offered to pay part of the expenses of a speaker from the national Association at the 1942 state meeting to be held in Nashville.

Wisconsin Dietetic Association. The annual meeting was held at the Schroeder Hotel, Milwaukee, March 21–22, with the following program:

Nutrition and Defense, Dr. C. A. Elvehjem, Department of Biochemistry, University of Wisconsin.
Discussion, Mable Flanley, director, Consumer Relations, The Borden Company, New York.
What is New in Nutrition? Dr. Helen T. Parsons.
The Work of the State Nutrition Committee, Frances Zuill.
Allergy, Dr. Francis Randolph.
Weighty Problems are Knotty Problems, University of Wisconsin Students.
The Nurse Views Dietetics, Moderator, Susan F. West; nurses, Leila Gibbons, Sister Bernice, Christine Murray; dietitians, Nell Clausen, Sister Josella, Martha Swanson.

The Wisconsin *Dietitian* for February was devoted principally to the national defense program, emphasizing the importance of widespread information in regard to nutrition. Many of the Wisconsin dietitians are working toward this end as illustrated by the following: Breta L. Griem has incorporated this new program in her work at Milwaukee Social Centers. Susan F. West gave a series of six lectures on vitamins to teachers, social workers and others interested in an up-to-date view of this important subject who attended a course at Milwaukee Downer College. Later Miss West presented several radio broadcasts on the same subject. Ada B. Lothe appeared before the Home Economics Club of Milwaukee and the City Club, sponsoring the subject of nutrition and

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COCOMALT with other food drinks. *It is not a mechanical mixture.* All ingredients are *malted together* . . . just the vitamins being added under controlled conditions. Precision manufacture plus uniformity is assured through regular biological tests. Clinical work, also, is continuous.

Three servings of COCOMALT per day — made with milk according to directions — give you —

Vitamin A	4200 I. U.
Vitamin B_1	360 I. U.
Vitamin D	402 I. U.
Vitamin G	488 S-B. U.
Calcium	1170 mgs.
Phosphorus	1140 mgs.
Iron	15 mgs.

COCOMALT is used by many leading physicians for undernourished children, pre- and post-operative cases, anorexia of dietary origin, anemias, pregnancy and lactation and numerous other conditions where special dietary needs are indicated.

For normal and therapeutic diets . . . for young and old . . .

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correlating its importance with Harriet Elliott's plan for consumer protection in the national defense program. Nell Clausen has received the registration of all dietitians enrolled in the national defense program. Checking state lists, and so on, has involved much detail. Magna Werra assisted in summarizing Wisconsin registrants.

Anita Schaefer, formerly with Sheboygan Memorial Hospital, Sheboygan, has accepted a position at Veterans Administration Facility, Kecoughtan, Virginia.

Ruth Ahnert, formerly with the Y.W.C.A., is now at Doctor's Hospital, Washington, D. C. Helen Starczak has filled the vacancy. Mrs. Cole is now dietitian at St. Luke's Hospital.

The revision of the Budget Book has been completed and copies can be obtained from the Central Council of Social Agencies for 25 cents. It is larger than the original edition and should be of practical value for social service agencies.

The annual Christmas party of the Madison Dietetic Association was held at the home of Helen Brown Geissel. Beulah Dahle and her committee arranged a smörgåsbord service.

A demonstration featuring the uses of electric roasters and casseroles was given by Melitta Jensen at the Madison Vocational School in January. Following the question period, steamed cranberry pudding cooked in the electric roaster was served. Sarah L. Wenger won the door prize, a "Nesco" casserole.

In February the annual dinner meeting was held jointly with the Madison Home Economics Club at the Memorial Union Hall with Eleanor Nesvig as chairman. Dr. Carl Neupert, State Board of Health, spoke on "New Phases of Public Health."

Abby Marlatt has returned from a vacation in Guatemala. She expects to spend the remainder of the winter in Arizona.

June Reif, formerly at Madison General Hospital, is now assistant dietitian at Wisconsin General Hospital.

Gertrude Sickinger, a graduate of Michigan State College who interned at the Indiana University Medical Center, is now assistant dietitian at Madison General.

News from our Advertisers and Exhibitors. *Economics Laboratory, Inc.*, St. Paul, Minnesota, announces the establishment of an eastern manufacturing plant at Newark, New Jersey, to manufacture their line of cleaning materials and floor wax for industrial and household use. This includes Super Soilax for mechanical dishwashing, Tetrox for hand glasswashing, Formula "B" Soilax for wall washing, paint cleaning and general use, Mikroklene, a germicidal detergent, and Satinwax, a self-polishing liquid wax. This company was organized in 1924 and in 1929 manufacturing facilities were moved from St. Paul to Chicago. Since then the corporation has enjoyed steadily expanding growth and the sales volume has now increased to a point where manufacturing facilities in Chicago are inadequate and necessitate the establishment of a second plant.

Gerber Products Company, Fremont, Michigan, makers of Gerber's Baby Foods, has announced the addition of a new product to the Junior Food line. "Vegetable and Lamb" is a combination of chopped meat and vegetables slightly seasoned. As in their other strained foods, the vegetables are home-grown on the acres surrounding the Gerber cannery, located in the heart of Michigan's famous vegetable-growing area. In predicting the immediate success of "Vegetable and Lamb" Gerber officials point to the wide acceptance of lamb as a proper meat for older babies, and the excellent flavor and high nutritive value of the new product. The total number of Gerber Baby Foods is now 26: 10 Junior Foods, 15 Strained Foods, and a Dry, Pre-Cooked Cereal Food.

Have You Heard?

New Broilers for Counter Service. The present need of luncheonettes, bars and hotels for compact and efficient counter-equipment is met by the newly-announced radiant heat models, which broil, barbecue, roast, fry and toast, all on one machine. These broilers, which effect saving in space and initial equipment cost, reduce gas consumption by more than 50 per cent. All cooking operations are centered around a single gas burner. Liberal insulation and baffling cut heat loss and the patented ceramic-radiant unit uses less than 30 cu. ft. of gas per hour.

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Appetizing Breads, Muffins, Pancakes

Make them quickly with CELLU 1-3-3 FLOUR. Plain, spiced, pineapple, blueberry, etc. Each finished muffin contains only 1 gram carbohydrate. One package makes 10 dozen.

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AUTOMATIC PEELER

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"But we've just got to have a steam table!"

"Then we've also got to have ROBERTSHAW controls. They'll stop the looting of fuel and foods!"

Robertshaw controls are an essential on new equipment, easily added to present equipment. Average fuel savings: 29%. Foods stay "oven fresh," require little attention.

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A new design in sipping straws is available. These "straws" are bent one-third of the way down at a 45-degree angle for "curvenient" sipping, and are made of a crystal-clear transparent cellulose material and treated with ultraviolet rays before being automatically packed. . . .Any liquid hot or cold, alcoholic or nonalcoholic, can be sipped through them. They can be readily discarded immediately after using, making sterilizing unnecessary, and should rapidly replace types difficult to sterilize, hard to keep clean and sightly, and dangerously fragile.

➢➢≺≺

Glycerine Facts, issued by the Glycerine Producers' Association, 11 W. 42nd St., New York, offers a sheet which gives the formulas for various products containing glycerine which is used in formulas for cleaning metals, grease-proofing boxes, furniture polishes, and abrasive hand soaps.

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A marked advance in activated charcoal deodorants for refrigerators and ice-boxes is offered in a new deodorant brick. Instead of the usual granulated charcoal used for this purpose the new product is a highly compressed small brick free from powdering and the resultant black dust and soot, and may be used indefinitely since it can be restored to its initial odor-absorbing state merely by placing in boiling water, followed by drying slowly in the sun, over a very low gas flame, or in a temperature oven. The deodorant is claimed to be of adequate capacity to keep the largest household refrigerator or ice-box free of disagreeable odors, and also prevents the contamination of butter and other susceptible foodstuffs.

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The long-expected introduction of a household frosted-food locker box took place throughout the country in September. The locker box is built in one-barrel and two-barrel capacities. It is streamlined, consisting of an upright cylinder, roughly the size of a barrel, with the compressor housed under a small hood at the side and the whole given a white, refrigerator-type finish. The manufacturers of this deep-freeze unit believe that it will have special application in hospital kitchens.

➢➢≺≺

New equipment for serving foods hot or cold is now available. A heavy cloud of vapor fills a space between two retaining walls and the resulting condensation is trapped and intensified, thus maintaining the temperature of the food. Cold food is kept cold by a small refrigeration unit inserted in the top of the container in which dry ice is placed and vaporized. The small storage space of this new unit, its "stackability", convenience and ease of cleaning, make this equipment adaptable for use in hotels, hospitals, air lines, and so on.

➢➢≺≺

A new juice extractor that cuts and juices whole oranges, lemons and limes in one operation has just been announced. With this new extractor no knife or cutting blade is needed. The operator merely places the whole fruit in the extractor and pulls down the lever. In a single operation the fruit is cut by the four stainless steel cutters and all the juice extracted. No pith or pulp is released into the drink. This is the only machine on the market which cuts and juices in one operation. It is also the fastest manually-operated juicer available. All parts coming in contact with the fruit juices are made of stainless materials. The squeezing assembly is easily removed for cleaning. Counter space required is 12 x 7 inches, overall height with lever raised is only 20 inches.

➢➢≺≺

A drink mixer with improved agitation which mixes the heaviest drink easily, providing a better mix and fluffing without splash, has recently been placed on the market. The turbine type of agitator is placed at a 7-degree angle which gives a faster, more vigorous action. Precision built, the new mixer provides quick, one-hand movement with positive locking support. The high speed motor starts automatically as soon as the cup is placed in position, stopping when the cup is removed. The mixer is attractively finished in heavy chromium plate with base finished in vitreous porcelain enamel, and a selection of three colors, verdant green, ivory, and black.

MOLASSES

A valuable dietary asset where EXTRA IRON is needed

NEW FINDINGS SHOW ITS HIGH IRON CONTENT IS OVER 80% AVAILABLE

QUICK SUMMARY

RESULTS: New Orleans molasses, known to be one of the richest food sources of iron, has now been proven to contain iron of from 80% to 97% *availability.*

HOW TESTED: (A) Chemically and biologically[1]. (B) Clinically[2].

SUGGESTED USES: For child feeding where its high calorie value plus iron content make molasses a valuable dietary asset; and to provide extra iron during pregnancy.

AVAILABLE IRON CONTENT: 0.653 mgs. per tablespoonful in Brer Rabbit Molasses—Gold Label grade. 1.078 mgs. per tablespoonful in Brer Rabbit Molasses—Green Label grade.

SUGGESTED AMOUNT: One to three tablespoonfuls daily. This may be taken plain, on bread, cereal, desserts or in milk. Physicians may vary the amount, depending on the iron need, age, condition and tolerance of the individual.

IT IS WELL KNOWN that molasses, with its abundant supply of iron, is one of the most inexpensive food sources of that mineral. It has now been determined conclusively that molasses—unlike many foods—contains iron in a form which is readily assimilated by the body.

To supply up-to-date, exact data on this subject, the makers of Brer Rabbit Molasses cooperated in carrying out chemical, biological and clinical research. A brief summary of results of the chemical and biological tests is reported here.

THE MOLASSES USED IN ALL TESTS WAS BRER RABBIT NEW ORLEANS MOLASSES.

The chemical and biological tests confirm the high iron *content* of Brer Rabbit Molasses; they also show the *availability* of the iron to be over 90% in the Gold Label grade and over 80% in the Green Label grade.

TABLE[1]

	Total iron mg/100 gm	Per cent availability	Available iron mg/100 gm
MOLASSES "A"*	3.2	97	3.1
MOLASSES "B"**	6.0	85	5.1
BEEF LIVER	8.2	70	5.7
OATMEAL	4.8	96	4.6
APRICOTS (*dry*)	4.1	98	4.0
EGGS	3.1	100	3.1
WHEAT	5.0	47	2.4
RAISINS (*Muscat*)	3.0	62	1.9
PARSLEY	3.2	50	1.6
BEEF MUSCLE	3.0	50	1.5
OYSTERS	5.8	22	1.3
CABBAGE	1.8	72	1.3
MUTTON	5.1	24	1.2
LETTUCE	1.5	63	0.9
SPINACH	2.6	20	0.5

*Brer Rabbit—Gold Label **Brer Rabbit—Green Label

1. Am. J. Dig. Dis. Vol. VI, No. 7 (Sept.) pp. 459-62, 1939
2. Clinical research completed. Paper being prepared for publication. Reprints of these papers will be sent physicians and nurses on request.

Taste preferences for molasses differ. Brer Rabbit comes in two flavors to meet all requirements. If a dark, full-flavored molasses is desired, specify Green Label Brer Rabbit (Molasses "B" in table). If a light, mild-flavored molasses is wanted, specify Gold Label Brer Rabbit (Molasses "A" in table).

Because of its low cost and palatability, may we suggest that you recommend the use of Brer Rabbit New Orleans Molasses where a higher iron content in the dietary is desirable? Penick & Ford, Ltd., Inc., Manufacturers of Brer Rabbit Molasses, New Orleans, La.

ACCEPTED AMERICAN MEDICAL ASSN. Council on Foods

WHO'S WHO IN THIS ISSUE

Hazel E. Munsell, Ph.D., who is assisting Dr. Henry C. Sherman at Columbia University, was noted under this section for October 1939.

Sue E. Sadow is a graduate of Simmons College, School of Home Economics, Boston, and has studied at the New York School of Social Work, Cornell University, University of Rochester School of Medicine, and Columbia University. Miss Sadow has had experience as an administrative and research dietitian in hospitals and camps, and has organized home economics and nutrition work in both private and public social service agencies such as the Jewish Family Welfare Society, Boston, and the Jewish Social Service Association, New York. Her major professional interest is the organization, development and administration of home economics work in social welfare agencies. In 1933 she organized and was appointed supervisor of the Home Economics Section of the New York City Department of Welfare.

Elizabeth Morrison Wagenet (Mrs. Gordon Wagenet) is a graduate of the University of California where she majored in economics. For the past twenty-five years she has served both as a volunteer and paid worker in the field of social economics, meanwhile raising two children, one of whom is in college and the other in high school.

Elizabeth C. Gibbs is manager of Residence Halls, Teachers College, Columbia University. Mrs. Gibbs holds the A.B. degree from St. Lawrence University where she majored in English and psychology, and the A.M. degree from Columbia University where she majored in institution management. She is a member of Phi Beta Kappa and the Business and Professional Women's Club.

Elizabeth Ink received her B.S. degree in home economics from Skidmore College in 1928 and her M.S. degree in institution management at Teachers College, Columbia University, in 1929. Since that time she has been at the John Jay Hall Dining Rooms and at present is in charge of the purchasing of the food, catering for parties and the service of the food in the cafeteria and main dining room and for the "Training Table" maintained for the football team and crew.

Selma Streit is business director of the Scottish Rite Dormitory, Austin, Texas. She has been very active in her state and national dietetic associations. At present she is a member of the board of *The Bulletin* of the Texas Dietetic Association, chairman of the state Administration Section, and member of the Placement Board, A.D.A.

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